Croonian Lectures
ON
POINTS CONNECTED WITH DIABETES.

Delivered at the Royal College of Physicians,

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LECTURE II.—PART IV.

BEFORE speaking of the results I shall have to place before you obtained by the process I have described, I will refer to the criticism of it that has been put forward by the partisans of Bernard's views in Paris. My observations were communicated to the Royal Society in June last, and shortly afterwards the *Progrès Médical* contained an article by M. Dastré, and the *Gazette Hebdomadaire* one by M. Vidau and another by Dr. d'Arsonval, Préparateur au Collége de France. I will not condescend to notice the rancorous remarks which the latter writer has indulged in. Had he been less ignorant of the literature of the subject, he would not have committed himself to the false representations he has done. Only so far as the interests of science demand will I occupy time in adverting to the criticism that has been set forth. Through mistaking the real source of the non-precipitation of the suboxide of copper in Bernard's application of the copper test, my critics have founded their chief objection to the mode of analysis I have proposed. The two processes cannot be looked at in the same light. Because with the large amount of potash—from 6 to 10 grammes in 20 cc. of liquid, according to the instructions given—the suboxide is held in solution, it does not follow that the slight amount of alkali present under my own mode of testing should lead to a solvent action. The fact is that in Bernard's process the suboxide does not fall, and in my own it does. I have already given my reasons for asserting that it is not to organic matter as such, but to organic matter placed under circumstances to develop ammonia, that the result, when no precipitate falls, is attributable. Unless ammonia is developed, no interference with precipitation occurs. The nitrogenous organic matter existing in the colourless liquid prepared with the assistance of sulphate of soda from blood is evidently not in a form to readily develop ammonia; otherwise in the ordinary rough application of the copper test in a test-tube no precipitation would be noticeable, whereas observation shows that it is. In my own method of procedure a much more diluted state of the alkali even exists, on account of the presence of the liquid used in washing the coagulum and the filter. Ordinarily, for instance, from 130 to 150 cc. of liquid are obtained, when the washing is completed, from 20 grammes of blood. Into this, say, 25 cc. of Fehling's solution are poured. The alkali present will be diluted to the proportion of about 1 per cent. In such a state of dilution there is nothing irrational in assuming that it may fail to possess the power of severing the elements of a nitrogenous organic principle, although in the proportion of about 1 to 2½ or 3, as in Bernard's process, it may be effectual in doing so.

Facts, however, are better than words, and, without any further argument, I will let the results of observation speak for themselves. The fact is that the organic matter present in the product for analysis from blood *does not*, to any appreciably significant extent, interfere with the deposition of suboxide, as is proved by the following results.

In the first place I tried the effect of adding known quantities of sugar to a specimen of sheep's blood which had been just collected from the animal. An analysis was made of the blood itself to determine the amount of sugar already contained in it. Sugar was added in three different proportions—viz., 20, 40, and 80 milligrammes. The quantities found, after taking the mean of the duplicate analyses performed in each case, and after making the deduction for the sugar originally present in the blood, were 19, 40, and 79 milligrammes respectively.

An observation was also made upon the product obtained from a piece of frozen liver. Ten milligrammes of sugar were added and 9·6 milligrammes found after deducting that shown by analysis to be originally present.

It may perhaps be said with regard to these experiments that they do not afford the full proof needed, as the blood and product from the liver in themselves allowed a certain amount of suboxide to fall, and, this being the case, the sugar added would not be reached by the influence of the organic matter present. To meet this objection, I have exposed sheep's blood for twenty-four hours in a situation where the thermometer stood at about 110° Fahr. (43° Cent.), with a view of effecting a complete removal of its sugar. At the end of this time the analysis gave rise to no deposition of suboxide. Two twenty-gramme portions were subjected to the ordinary preparation with sulphate of soda, and twenty milligrammes of sugar were then added to each of the products. The amount of sugar found, taking the mean of the two analyses, was 19·6 milligrammes. I consider that a complete answer is given to the allegation that the organic matter remaining in the prepared product for analysis vitiates the result by interfering with the deposition of suboxide, and giving rise to a lower indication of sugar than should be afforded. If this action were exerted in the case of blood in its natural state, is it not reasonable to infer that the effect would also be perceptible upon some of the sugar added in the experiments I have recorded?

As to a suggested loss in the process of analysis by sugar being allowed to remain behind in the coagulum, in filtration, and in washing, I would simply tell my critics that the operations performed in my laboratory are not conducted in such a loose manner as to engender fallacy from such a cause. The proposition is a perfectly gratuitous one, and is shown to be groundless by the close accord noticeable in the counterpart analyses, to which I shall have presently to direct attention. Indeed, the uniformity in some of the results is almost surprising, and might even be considered satisfactory for an inorganic instead of an organic material. It may be further said that the figures, it must be borne in mind, represent parts per 1000, whilst the analysis is conducted upon only about twenty grammes of blood. The difference, therefore, in the results as they appear is fifty times greater than that obtained in the actual process of weighing.

I am not unmindful of what I said in speaking of the urine with regard to the concealment of the reaction belonging to the minute quantity of sugar susceptible of being shown by lead precipitation to be present, and it will naturally be required of me to explain the apparent anomaly that here exists. The explanation is readily given, and what is noticeable in fact lends support to the proposition I have advanced.

It is well known that urine may be easily made to give rise to the evolution of ammonia. I need not enter into the chemical question of whether it exists ready formed or not; or, assuming its existence, as there is ground for doing, in what state of combination it is present; suffice it for my purpose to say that the simple application of heat to perfectly fresh urine leads to its escape, and, after the addition of an alkali heat produces a pretty free evolution distinctly appreciable to test-paper. If a little moistened test-paper be held at the mouth of a test-tube containing a mixture of urine and Fehling's solution, and heat be applied as in the ordinary mode of testing for sugar, strong evidence is afforded of the escape of ammonia. Now, ammonia is a principle which, as I have before explained, possesses the power of dissolving suboxide of copper. We have, therefore, in the urine sufficient to account for the concealment of the suboxide produced by the reducing influence of the minute quantity of sugar present. With more sugar present the amount of suboxide formed exceeds the solvent power of the ammonia, and a precipitate falls. By looking to ammonia as the source of the obscure behaviour of the copper-test with urine containing small quantities of sugar, the different kinds of reaction noticeable upon different occasions—sometimes, for instance, more or less reduction after long boiling, sometimes no appearance of reduction till after the test-tube has been placed aside for a little while, and sometimes the contents of the tube becoming yellow and translucent for a little time, and then all of a sudden throwing down a quantity of precipitate of ordinary kind—become at once intelligible. From the position held by the copper test as an agent so frequently made use of as it is for clinical purposes, the point I have been referring to appears to me to possess an interest beyond its connexion with the question under immediate consideration.

With the product obtained with the agency of sulphate of soda from blood a very different result occurs as regards the development of ammonia. Let a portion be placed in a test-tube and treated with Fehling's solution in the usual manner for testing for sugar, and boiled. A piece of moistened test-paper held at the mouth of the test-tube shows no decided

evolution of ammonia; at least, if any at all occurs, the amount can only be very slight. Let a little urine be now dropped into the tube, and the contents be reboiled. A strong effect is at once produced upon the test-paper.

Thus, then, because a certain amount of sugar may escape being revealed by deposition of suboxide from the copper test in the case of the urine, it does not follow that such should occur in the analysis of blood. There is a difference in the condition of the liquids to which the test is applied, and that there should be a difference in the result is not only in harmony with what might be looked for, but helps to give consistency to the whole.

Such is the reply I have to make to the criticism of the process upon which the results I shall have to bring forward are founded. Instead of the difference between the results obtained by Bernard's and my own process being due, as suggested, to a defective action of the latter, I insist that the fault lies on the other side. I have shown that Bernard's process gives the behaviour in a notable quantitative manner belonging to sugar under circumstances incompatible, it may be said, with its presence, and the action thus occurring will account for the higher figures obtained by it.

"I will not," says Dr. d'Arsonval, "have the cruelty, like M. Vidau, to state to Dr. Pavy that his process is found to have been described a number of years back by Fresenius and Henri Rose, whom he could have quoted." Unfounded as this assertion is, the consideration shown to me deserves some recognition on my part, and I therefore, in concluding this matter, will not have the cruelty to say more than that capacity as an observer and fidelity as a writer are needful qualifications for a man who professes to be devoted to science, and I leave it to be judged by others how far these qualities are to be found displayed by the "Préparateur" of the College of France in his communication to the *Gazette Hebdomadaire* of the 14th of September last year.

I now come to the amount of sugar shown to be present in the blood by the process I have described and discussed. I have results to place before you derived from the examination of the blood of the dog, sheep, and bullock. These results were obtained from specimens collected with the requisite precautions to afford a representation of the natural state. Observation shows that the amount of sugar undergoes a very speedy and marked alteration under deviations from a normal and tranquil condition; and, to avoid exposure to fallacy, it is absolutely necessary to give as strict attention to what may be called the physiological as to the chemical part of the experiment. To escape from the vitiating circumstances that might ensue from the effect of the operation to procure the blood during life, I consider it best that it should be collected at the moment of death. In adopting this course, the chief point to be looked to is to guard against allowing time for the contents of the circulation to become influenced by the production of sugar that occurs in the liver as a post-mortem result.

Here are the results derived from my observations conducted upon dogs. In the first six the blood was obtained by pithing the animal and *instantly* afterwards inserting a scalpel into the chest and freely incising the heart and large vessels. The chest was then quickly opened and the blood dipped out and treated for analysis before coagulation had occurred. In the seventh observation the blood was obtained by division of the jugular vein instantly after pithing, instead of from the chest. Counterpart analyses were in each case made, for the sake of verifying the results.

Amount of sugar present in the blood of the dog.

		Sugar per 1000 parts.	Mean.
Observation 1	(*a*) 0·743		0·751
	(*b*) 0·758		
,, 2	(*a*) 0·776		0·786
	(*b*) 0·797		
,, 3	(*a*) 0·706		0·700
	(*b*) 0·694		
,, 4	(*a*) 0·770		0·766
	(*b*) 0·762		
,, 5	(*a*) 0·777		0·786
	(*b*) 0·795		
,, 6	(*a*) 0·795		0·803
	(*b*) 0·811		
,, 7	(*a*) 0·932		0·921
	(*b*) 0·910		

Average, 0·787 per 1000.

The blood from the sheep was obtained from the slaughter-house. The animals were killed in the usual way—namely, by passing a knife through the neck and dividing the vessels, and it was the first portion which escaped that was collected for analysis. The time elapsing between the collection and the commencement of analysis did not exceed a quarter of an hour. As coagulation had taken place, the clot was snipped with a pair of scissors into fine pieces, for the sake of convenience and for securing uniformity.

Amount of sugar present in the blood of the sheep.

		Sugar per 1000 parts.	Mean.
Observation 1	(*a*) 0·456		0·470
	(*b*) 0·484		
,, 2	(*a*) 0·538		0·490
	(*b*) 0·447		
,, 3	(*a*) 0·509		0·517
	(*b*) 0·526		
,, 4	(*a*) 0·577		0·559
	(*b*) 0·542		
,, 5	(*a*) 0·590		0·569
	(*b*) 0·548		
,, 6	(*a*) 0·527		0·526
	(*b*) 0·525		

Average, 0·521 per 1000.

In the case of the bullock, I have availed myself of the Jewish method of slaughtering for obtaining the blood. Under this method the animal is killed by drawing a sharp knife across the neck and cutting through all the parts in front of the vertebral column. It is arterial blood that is thus furnished. One hour elapsed before the commencement of the analysis.

Amount of sugar present in the blood of the bullock.

		Sugar per 1000 parts.	Mean.
Observation 1	(*a*) 0·698		0·703
	(*b*) 0·709		
,, 2	(*a*) 0·515		0·525
	(*b*) 0·535		
,, 3	(*a*) 0·500		0·492
	(*b*) 0·484		
,, 4	(*a*) 0·464		0·456
	(*b*) 0·449		
,, 5	(*a*) 0·510		0·499
	(*b*) 0·489		
,, 6	(*a*) 0·589		0·588
	(*b*) 0·588		

Average, 0·543 per 1000.

I have laid stress upon the importance of giving attention to the manner in which the blood is collected for examination. Killing by the poleaxe does not yield a suitable specimen unless the subsequent incision into the lower part of the neck for the escape of blood is more expeditiously performed than is usually done. I have learnt by observation that with blood thus collected analysis may show double the quantity of sugar found under the Jewish process. A striking exemplification is here afforded of how beset with difficulty this subject is, and how guarded it is necessary to be to escape from fallacy.

The period that elapsed between the collection of the blood and its examination has been mentioned on account of what Bernard has said with regard to the disappearance of sugar in blood that is kept. I have carefully investigated this point, and am able to state that the rate of disappearance under exposure to an ordinary temperature is only slow, and that nothing of significance is perceptible within a moderate time after removal. My results were published in the Proceedings of the Royal Society for June, 1877, and they show that even at the end of twenty-four hours a considerable proportion of the sugar originally present is to be found.

Having said thus much with regard to the quantity of sugar naturally existing in the blood, which we find, according to the information supplied, amounts to no more, speaking roundly, than ½ per 1000 in the case of the sheep and bullock, and ¾ per 1000 in that of the dog, I will pass to the liver, and show what quantitative analysis reveals in relation to this organ.

In the first place, recourse must be had to a method of

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preparation for the application of the analytical process which will secure that a representation of the state belonging to life is given. The plan I have adopted is simple, easily performed, and cannot be otherwise than free from objection. It is this. The animal is killed by pithing, and, as speedily as it can be done, the abdomen is laid open, and a piece of the liver obtained and plunged into a freezing mixture of ice and salt. The object is to lower the temperature sufficiently to check the post-mortem transformation of amyloid substance as quickly as possible. The piece of liver should not be very thick, and one or two incisions with the scalpel may be made into it the better to secure the rapid penetration of the freezing influence. The temperature of the freezing mixture should be below 0° Fahr., and the ice and salt should be in a partially liquefied state, in order that the most favourable condition for action may exist. The desirability of freely stirring the piece of liver about in the freezing mixture for the first moment or two after being plunged in will naturally suggest itself.

After the completion of the freezing process, the next step is to extract whatever sugar may exist in the frozen mass without affording an opportunity for any fresh formation to occur. Whilst in the frozen state there is no danger of change, and weighing for analysis may be deliberately performed. It is convenient to take about twenty grammes, and, when the weighing has been finished, the portion taken is transferred to a mortar, thoroughly pounded up, and then treated with spirit. From 300 to 400 cc. should be used, and, when once added, the subsequent steps may be leisurely carried out. Whilst dissolving the sugar the spirit coagulates the ferment, and leaves behind the amyloid substance.[1] After the pounded liver and spirit have been allowed to digest together for some time, filtration is performed, and the filtrate brought down to a small bulk over the water-bath. There happens to be a resinoid material in the spirituous extract, which interferes with filtration after boiling with the copper test. I have found it necessary to get rid of this, and the addition of some sulphate-of-soda solution answers the purpose. After the addition has been made, evaporation is still carried on until the resinoid matter is seen to have collected in a separate form. It is now easily removed by filtration, but the required washing must be performed with the sulphate-of-soda solution.

The process has now reached the stage for the employment of the copper solution, and the subsequent steps of the operation are carried out in precisely the same manner as I have described for the blood. Here are the figures yielded by observations conducted upon the cat, rabbit, and dog.

Amount of sugar found in the liver, taken at the moment of death.

				Sugar per 1000 parts.
CAT.				
Observation	1	...	...	0·545
,,	2	...	...	0·431
,,	3	...	...	0·087
,,	4	...	...	0·182
,,	5	...	...	0·248
,,	6	...	...	0·345
,,	7	...	...	0·056
RABBIT.				
Observation	1	...	...	0·554
,,	2	...	...	0·597
,,	3	...	...	0·069
DOG.				
Observation	1	...	...	0·315

This completes what I have to say about the amount of sugar naturally existing in the blood and liver during life. The figures I have placed before you will, I think, be seen to fully justify the assertion I made in my original communication upon the subject twenty years ago. Our position was then such that I was unable to give reliable quantitative determinations, and I spoke of the amount estimated from the behaviour of the copper test as corresponding with a slight, or trace of, reaction.

[1] I noticed in THE LANCET of the 4th inst. a letter from Mr. Masterman, of Ixworth, referring to the transformation of inulin—an amylaceous substance—into glucose in the dead root of the dandelion. His communication is of interest as showing the existence of an analogy between the action occurring in the liver of an animal and the root of a plant after death, there being in both cases an amylaceous material and a ferment present. Mr. Masterman suggests the employment of alcohol for separating the inuline, to show that the living root is free, or almost free, from glucose; and alcohol is the agent I have made use of with a similar object for the liver.

Clinical Lecture
ON
CASES OF INTRA-THORACIC CANCER.

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GENTLEMEN,—We have on the table before us some pathological specimens which were taken two days since from a woman who died with intra-thoracic cancer. I will give you a brief history of the case as recorded by my clinical clerk, Mr. Balls; and afterwards indicate some remarkable points of resemblance between this case and a similar one that was in the hospital under my care about eighteen months ago.

E. S——, aged forty-four, a cook, unmarried, was admitted Jan. 10th. Has slept in a damp and close bedroom. Has long suffered from indigestion; has not been able to eat any fat and but little butter. She has twice suffered from quinsy and often had sore-throat. Her father died of consumption. About three months ago she began to suffer from cough and pain in the right side and between the shoulders. A fortnight ago her voice became husky, and for the last week her breathing has become short.

On admission her condition was as follows. She appeared plump and well-nourished, rather fat in her face, and especially the eyelids were congested and swollen, some degree exophthalmos, and the lips livid. There was considerable swelling of the neck, and both external jugular veins were much distended. There was enlargement of the subcutaneous veins over the right side of the chest in front and in the right interscapular region. On the left side of the chest there was fairly good respiratory movement; the right side was motionless. The whole right side was dull on percussion, except between the clavicle and the third rib, where there was hyper-resonance on percussion, and on auscultation a feeble respiratory murmur was heard there, while below respiratory sounds were absent. At the back there was harsh tubular breathing, with bronchophony in the right interscapular region on a level with the spine of the scapula; absence of respiratory sounds below. Vocal fremitus diminished over the right lung; puerile breathing over the left lung. Heart-sounds normal; urine normal. Hepatic dulness extended from two to three inches below the margin of the ribs. Temperature 101°F.; pulse 128; respiration 26. A mixture of ammonia and spirit of chloroform was ordered.

On the 14th, when I saw her for the first time, the dulness on the right side extended to the apex. Harsh tubular breathing, with bronchophony, was heard below the right clavicle, as well as in the interscapular region. There was a scanty mucous expectoration; a hard gland, about the size of a large walnut, in the right axilla. The right semi-diameter of the chest was half an inch larger than the left.

Upon these data it was not difficult to form a confident diagnosis of cancer, probably commencing in the bronchial glands on the right side, encroaching upon and compressing the right lung, and causing a liquid dropsical effusion into the pleura, the liquid having increased considerably between the 10th and the 14th, as indicated by the before-mentioned change in the percussion signs. The harsh tubular breathing and bronchophony front and back are explained by the conduction of sound through a cancerous growth surrounding the bronchi at the root of the lung. Further, in the distended state of the veins of the neck, and beneath the skin on the right side of the chest, there is evidence that the superior cava is nearly, if not quite, obliterated by the growth. The swollen gland in the axilla helps to confirm the diagnosis of cancer. This diagnosis, and the reasons for it, as some of you will remember, were given at the bedside.

On the 14th the house-physician, Mr. Willcocks, at my request introduced a fine-pointed cannula beneath the angle of the scapula, and drew off with the aspirator thirteen ounces of greenish serum. This afforded some relief to the breathing, but the physical signs remained unchanged. During the next few days the distension of the veins appeared to increase, the face, and especially the eyelids, became

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more œdematous, and she complained of increasing dyspnœa, restlessness, and headache. On Jan. 21st, a cannula was introduced lower down than before, between the eighth and ninth ribs, in a line below the angle of the scapula, and this time fifty-two ounces of serum were withdrawn by the aspirator. For some days after this the respiration was somewhat easier, but the relief was only temporary, and gradually all the distressing symptoms returned and increased. The expectoration was occasionally blood-tinged, and sometimes consisted almost entirely of blood. The physical signs remained unchanged. Both arms gradually became œdematous. A superficial mammary vein was seen to anastomose below with a superficial epigastric vein. On Feb. 6th the aspirator was again used, but this time only four ounces of liquid were withdrawn. On Feb. 7th the urine contained a trace of albumen, and this continued until her death on Feb. 14th. Meanwhile the venous engorgement and the swelling of the neck continued to increase. There was orthopnœa, and gradually increasing drowsiness, ending in coma. During the last few days the legs became slightly œdematous.

The body was examined by the pathological registrar, Dr. Barrow, twenty-six hours after death. On cutting through the integuments and muscles over the chest a large quantity of serous fluid escaped. On removing the sternum and cartilages a firm cancerous mass was seen in the anterior mediastinum, extending from the sterno-clavicular joint to the diaphragm. The tumour and the compressed lung were pretty extensively adherent to the chest wall, but at the back part serous fluid to the extent of about ten ounces was surrounded by recent adhesions. The morbid appearances are thus described by Dr. Barrow, and most points of his description you can here verify by your own inspection:—"A tumour exists in the mediastina, coming forwards to the posterior surface of the sternum, and reaching the spinal column posteriorly. On the left side it scarcely extends beyond the middle line of the body, but on the right it pushes the lung quite to the outer and posterior part of the thorax. Above and below it is limited at the sterno-clavicular articulation and the diaphragm. It has caused the following alterations in the parts around:—Heart displaced towards left. Superior vena cava almost entirely occluded, and its supplying veins greatly distended, so that serous fluid has escaped from them into the muscular and subcutaneous tissues. Cavity of right auricle encroached upon, as are also the inferior vena cava, right bronchus, and pulmonary veins. Right lung is so compressed as only to measure about one inch and a half in thickness, and is scarcely at all crepitant. Diaphragm and liver are displaced downwards, so that the lower margin of the liver is three inches below the costal margin and the level of the diaphragm is at the interspace between the sixth and seventh ribs. On cutting into the mass through the lung covering it, it is found to be lobulated in form, the lobules projecting into the lung, but being circumscribed, and apparently more or less encapsuled. The section of the tumour has a reddish-grey colour, is of extremely soft consistence, and, on applying very moderate pressure, a thick white fluid flows from it. Microscopical examination of this fluid reveals small round nucleated cells, granular in appearance, and of uniform size. There are also some very large granular masses to be seen. A lymphatic gland in the axilla presents similar characters. Changes in other organs unimportant."

It will be seen that the diagnosis was verified, and that the symptoms observed during life are completely explained by the post-mortem appearances. The almost complete obliteration of the superior cava explains the great venous distension, the slight protrusion of the eyeballs, and the swelling of the face, neck, and upper extremities. The blood-tinged expectoration and hæmoptysis are probably due to *bronchial* venous and capillary engorgement, the bronchial veins, as you know, being tributaries of the superior cava through the vena azygos and the left superior intercostal veins. The slight œdema of the lower extremities, and the albuminuria which appeared during the last fortnight, were probably caused by the partial obstruction of the inferior cava and the resulting venous engorgement.

Some of you will probably remember that about eighteen months ago I had under my care in the same ward a case in some respects very similar to that which we have just now been discussing. The case was that of A. E——, a washerwoman, thirty years of age, who was admitted into Twining ward on Oct. 5th, 1876. You will find a full history of this case published by Dr. Tirard in the *Medical Times and Gazette* of Feb. 17th, 1877. In that case, as in the more recent one, there was great fulness of the jugulars and of their tributary veins, with distension of the subcutaneous veins over the chest. There was dulness on percussion over the upper and middle lobe of the right lung, with bronchial breathing and voice over the dull space; moist sounds were audible over both lungs. For several days after her admission she spat as much as from half an ounce to two ounces of blood in the twenty-four hours. In addition to the chest symptoms there was a nodulated tumour in the abdomen, apparently connected with the liver. She became more and more cyanosed, the hæmoptysis became more profuse, and she had several paroxysms of dyspnœa, in one of which she died on Oct. 14th. On opening the chest the right lung was found firmly adherent to the chest-wall, the pleura at the apex being much thickened. The upper and middle lobes were engorged and non-crepitant, having been compressed by a cancerous mass about three inches in diameter, which had apparently originated in the bronchial glands, sending off ramifications along the bronchi. Several cancerous masses, of the diameter of a sixpence, were scattered through the upper and middle lobe of the lung. Some of the bronchial tubes contained blood-clots. The lower lobe of the right lung and the whole of the left lung were much congested. By an oversight, the relation of the superior cava to the cancerous mass was not made out. The liver weighed 122 ounces, and contained several cancerous masses, and the head of the pancreas was the seat of a cancerous deposit. On microscopical examination the masses of new growth in the lung were found to be encephalomatous, consisting mainly of large alveoli filled with cells of irregular outline, containing large nuclei and highly-refracting nucleoli.

There are several points of resemblance between the thoracic symptoms in these two cases. In both cases cancerous disease originating in the bronchial glands had encroached upon and compressed the right lung; the whole lung in one case, the upper and middle lobes in the other. In both cases there was great distension of the jugular and of the subcutaneous veins, the result in both cases no doubt of the superior cava being implicated in the growth, although in the earlier case this was not actually made out at the post-mortem examination. In both cases there was hæmoptysis, which, as I have before stated, was probably due to mechanical distension and rupture of *bronchial* veins and capillaries. In both cases loud tubular breathing and bronchophony were heard over the dull space; the respiratory and the vocal sounds were conducted from the pervious bronchial tubes through the engorged and consolidated lung-tissue and through the surrounding cancerous growth. The physical signs in this respect differ from those which are observed when the lung, or one lobe of a lung, becomes infiltrated by a primary cancerous growth, which fills and obliterates the bronchial tubes. In such a case, with extreme dulness on percussion, there is almost total absence of respiratory and vocal sounds and of vocal fremitus over the consolidated lung. Many years since such a case was under my care in Sambrooke ward. J. R——, aged forty-one, admitted on June 7th, 1856, had been losing flesh for several weeks, and complained of severe pain on the right side of the chest. He had cough with some blood-tinged mucous expectoration. There was extreme dulness on percussion, corresponding exactly with the lower lobe of the right lung. Over the dull space the respiratory sound was scarcely audible, and the vocal fremitus was diminished. There was some contraction of that side. In some respects, then, the case had the appearance of chronic pleurisy, but we were helped in the diagnosis of cancerous disease of the lung by the appearance of a painful nodular elastic projection between the ribs from the seventh to the tenth. He got gradually weaker, and died on August 3rd. The whole lower lobe of the lung was found consolidated by a cancerous infiltration, which had undergone softening in its centre, so that in separating the firm adhesions which bound the lung to the ribs a quantity of creamy, broken-down cancerous matter escaped, leaving a cavity which would hold about twenty ounces of liquid. The nodular tumour (about the size of an orange) before mentioned was caused by the extension of the disease from the lung through the intercostal spaces.

In this case, as you will see, a primary cancerous infiltration of the lung invaded and obliterated alike the air-cells and the bronchial tubes, converting the lung into a solid impervious mass, while in our two recent cases cancerous disease of the bronchial glands implicated the lung in a

secondary way, leaving the bronchial tubes pervious. The differences in the physical signs in the two classes of cases—in particular the almost complete absence of respiratory and vocal sounds and vocal fremitus in one, and the harsh tubular breathing and bronchophony in the other—are fully explained by the diverse anatomical condition of the lung.

In the case of J. R—— there was observed during the last fortnight of his life an interesting phenomenon which deserves a brief mention. Two superficial veins on the right side of the neck—the external jugular and a thyroid vein—were seen to pulsate strongly with each beat of the heart; the venous pulse ceased when the patient sat up, and the veins on the left side of the neck were free from pulsation. At the same date there was noted dulness on percussion and tubular breathing over a small space below the sternal end of the right clavicle. The explanation of these phenomena was found in a mass of enlarged lymphatic glands which extended from the right sterno-clavicular joint to the trachea, and which also passed between the ascending aorta and the right brachio-cephalic vein. Thus the tubular breathing was explained by the conduction of the breath-sound through the tumour from the trachea to the chest-wall, and the venous pulse resulted from the impulse of the aorta being communicated to the right brachio-cephalic vein and its tributaries by the interposed glandular mass.

ON

SURGICAL EVIDENCE IN COURTS OF LAW,

WITH SUGGESTIONS FOR ITS IMPROVEMENT.

BY JOHN ERIC ERICHSEN, F.R.S., F.R.C.S.,

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(Concluded from p. 632.)

III.—SUGGESTIONS FOR ITS IMPROVEMENT.

SETTING aside the considerations advanced in the last section of this paper, which have reference mainly to the medical practitioner and to the public, let us now inquire whether some method could not be devised by which a more satisfactory tribunal could be constituted for the award of damages in these cases than that which now exists; whether, in fact, "a judge who knows little and a jury which knows less" about the nature of the questions at issue, do not constitute about the most unsatisfactory tribunal, whether to plaintiff or to defendant, that could well be devised.

That cases involving medical questions of an intricate and difficult character should be tried before a tribunal that possesses a sufficient amount of special technical knowledge to form a correct judgment on the points at issue admits of no denial. Various suggestions have been made as to the proper constitution of such a tribunal. It may be either purely medical, or a mixed medical and legal Court, or one consisting of a judge assisted by medical assessors.

Were the questions at issue purely medical, it might be supposed that a tribunal composed of surgeons and physicians would be the best qualified to decide on the case. But even where the negligence is admitted, and all collateral issues thus eliminated, there are two of the three elements in the claim for compensation—viz., the loss of business and the extra expense incurred in the restoration of health—that are in no way of a medical nature, and with which a purely medical tribunal would not be competent to deal. And even the third element in the claim—viz., that of compensation for personal injury—is never satisfactorily dealt with by medical men only. I have several times attended the trial of cases before a medical referee, and nothing can possibly be imagined more unsatisfactory or irregular than the whole of the proceedings. The rules of evidence are ignored; discussions between witnesses and the referee, often of an animated nature, spring up; much time is wasted; and a case which before a properly constituted legal tribunal would be disposed of in three or four hours will occupy several days. The referee is apt to be unconsciously swayed by professional feeling—to have a leaning to or a prejudice against particular individuals or particular doctrines. Even if it is possible to suppose a professional man to be entirely above all such influences, the referee, however conscientious, honourable, and painstaking he may be, anxious to do the fullest justice to both parties, becomes overwhelmed and confused by the intricacy of the case, and usually ends by delivering a judgment which is a sort of compromise, and consequently satisfactory to neither side. To quote again Mr. Wills, who, writing on another subject, makes these very apposite remarks: "The truth is that the qualities necessary for the proper discharge of judicial duties are not often born with a man. ..... Even after long familiarity with the practice and traditions of the best Courts, how many fail ever to gain the habit of not making up their minds prematurely." No medical man receives any legal education at all—"least of all that which consists in being steeped in the traditions and the feelings of which the judges and the Bar are the natural depositories"; and indeed the necessity as well as the habit of our profession, and that to which we are accustomed in practice, is to decide quickly, if not prematurely, on the case before us.

But if a purely medical tribunal is open to very serious objections, a mixed medical and legal court might be supposed to combine all the elements that would be required for a thorough comprehension of and a sound judgment on the case in all its bearings and in its relations to both professions. Of this kind of tribunal I can only say that it presents no advantage over the other. It is usually composed of a barrister or accountant, a surgeon, and an umpire, whose decision, in the event of disagreement, is final. The barrister who is associated with the surgeon, after settling the non-medical part of the case, leaves the rest to his colleague, to whom the same objections apply as to the medical referee in the purely medical court.

In both these tribunals there is much of the semblance but none of the dignity or weight of a trial in an ordinary court of law. Witnesses are sworn, examined, and cross-examined; but that decorum, dignity, and order which are so characteristic of our higher courts are utterly wanting in an inquiry conducted in a room at an hotel or in a coffee-house, and before judges who, whatever their strictly professional merits may be, cannot always be credited with "having gained the habit of not making up their minds prematurely." In fact, both of these tribunals, with the very best intentions in the world on the part of those who preside over them, with the utmost desire to act honestly and conscientiously, but from want of the properly trained judicial elements, become a mere mockery of a court of justice, and had I a case to be tried, no consideration could induce me to allow it to be brought before one or other of them, so small is my trust in their competency. Not the least evil connected with these courts of reference or of arbitration is that, however unwise or unjust the decision, however contrary to the evidence, there is no appeal against it, one of the essential stipulations being that it should be final.

But is there no method of combining the two great desiderata in a tribunal which has to try cases involving scientific knowledge—viz., the matured experience of the judge with the technical knowledge of the man of science? I think that the answer to this question may be sought and found in the constitution of those courts of law the special function of which is to try cases which are of a mixed legal and technical character. Such are the courts that are concerned with the determination of actions or inquiries connected with nautical affairs involving either a special scientific knowledge of or a practical acquaintance with the subject of navigation.

There are two courts that are engaged in the determination of these questions—one the Court of Admiralty, presided over by a judge, who is assisted in his judgment on the questions at issue by two Trinity Masters; the other the Wreck Commissioners' Court, presided over by a barrister, assisted by two officers—one belonging to the navy, the other to the mercantile marine.

The constitution of the Court of Admiralty, according to "Bruce and Williams' Admiralty Practice," p. 271, is as follows:—"If the questions in the cause depend upon technical skill and experience in navigation, the judge is usually assisted by two of the elder Brethren of the Trinity House, who sit with him as assessors, and who, at the request of the judge, after hearing all the evidence on each side, advise him on all questions of a nautical character. In suits of damage, attendance of Trinity Masters may be obtained as a matter of course. Either party may file a *præcipe* in registry praying for attendance, and on filing the *præcipe* a notice is

sent to Trinity House requesting attendance of Masters. By the County Court Admiralty Jurisdiction Act, 31 and 32 Vic., cap. 71, sec. 10, the County Court judge, if he thinks fit, or on request of either party, shall be assisted by two nautical assessors. Sec. 10 enables the judge to summon the assessors, and sec. 14 the registrar of County Courts to form a list of persons competent to act as assessors, the list to be affirmed and published in the *Gazette*."

Nothing can possibly be more simple, more rational, or more likely to conduce to a just decision on the part of the Court than the practice here laid down, and if a similar course were adopted in other questions than nautical ones requiring for their elucidation technical skill and experience, there could be no fear of a miscarriage of justice arising from want of knowledge on the part of the tribunal of the questions discussed before and by it. We have only in the above regulations to substitute the word "surgery" or "medicine" for "navigation," and "Fellows of the College of Surgeons" for "Trinity Brethren," and we should at once obtain a tribunal that would certainly not err from lack of knowledge.

But the use of assessors is no longer necessarily limited to the Court of Admiralty. By the Judicature Act, 1873, sec. 56, the Court may *in any cause* or matter call in the aid of one or more assessors, especially qualified, and try or hear the cause or matter, wholly or partially, with the assistance of such assessors. The assessors' remuneration to be determined by the Court. By Rule 30 of Order 36 referees may call in assessors.

It will be observed that the assessors referred to in the Judicature Act are not limited to cases involving only nautical matters. I am, however, informed on reliable legal authority that the powers of trying with assessors given by the Judicature Act have not been acted upon, as there is no power to have assessors in a *jury* case. If these assessors were to sit with a judge in order to help him over the difficulties of that part of the case which is of a purely technical nature, it would be necessary to try it without a jury; there being not only no provision for the combined action of assessors and a jury, but there being a manifest inconvenience in a judge being assisted in the formation of his judgment by experts in the face of the jury, which he in his turn would have to direct in coming to a judgment in matters, not of fact, but of opinion. The only alternative seems to be for the case to be tried, as in the Admiralty Court, by a judge aided by assessors, and without a jury. To those who entertain the view that juries know less than little of scientific matters, this arrangement might appear to be sufficiently feasible. But would it be satisfactory to the public? I doubt it much. It is with much diffidence that I venture to dissent from the not very flattering opinion entertained of the scientific capacity of jurymen to which reference has more than once been made. But I cannot agree with it, for I have known not only scientific men but retired medical men and experienced army surgeons serve on special juries. But a few months ago I was, on leaving court, accosted by an old pupil of mine who, after serving for many years in India, had retired from the medical service, and I was told that he had been one of the jury before which the case in which I had just been concerned had been tried. Now, such a man as this would, from his professional knowledge, be especially competent to form an opinion of his own, and to guide that of his fellow-jurymen, in a case depending on the proper solution of medical questions, and would most certainly know much more than little of the questions submitted to the decision of the jury. It may possibly be owing to the presence of scientific or professional men in the jury-box that I have more than once seen a jury, uninfluenced by the stubborn subtlety of counsel or the summing-up of a judge, come to a just opinion on a case, and save the Court from the discredit of a miscarriage of justice.

But although the presence of assessors on the bench is incompatible with that of a jury in the box, a plan might perhaps be devised by which the advantages of the two could be combined, and by which that conflict of medical evidence might be avoided which, if it is not developed, is certainly fostered and intensified, by the obvious incapacity of the Court to form a correct judgment on the medical questions submitted to it, and on which it has to decide.

The conflict of medical evidence often arises in consequence of a want of proper understanding between the medical men engaged on the opposite sides of the case. As matters are now arranged, there is, as I have already shown, no "consultation," in the proper sense of the word, between them. The surgeon of the company examines, it is true, the plaintiff before, and in the presence of his (the plaintiff's) own medical men; but there is no after-discussion of the case, no attempt, as in an ordinary consultation, to reconcile discordant views, and to come to a combined opinion on the case. Neither party knows the exact views of the other on any point, or on the value of any one symptom, until they are heard in court. This is a great evil, and might be corrected by the surgeons on the two sides meeting as ordinary consultants, discussing the case together, and, if possible, drawing up and signing a conjoint report. If such a report could be obtained it might be handed in for the guidance of the judge and counsel, and the strictly medical part of the case would be much simplified. In fact it would be disposed of if all parties concerned had substantially agreed before it came into court as to the nature, extent, and probable duration of the plaintiff's injuries and their consequences, the tripod on which the medical question always rests. In the event of there being such discrepancy of opinion that an agreement could not be come to on any or on all of these points, the judge should appoint at least two surgeons of known character, and of recognised skill in the particular class of injury under consideration, to draw up a report upon the plaintiff's past and present condition and future prospects. This report would serve to guide the Court in coming to an opinion on the purely surgical part of the case, and afford it that information which men who admittedly know little of a subject on which they are to decide must necessarily be supposed to wish to obtain. The experts or assessors who draw up this report should be appointed by the Court, and not by the litigants. Their position would consequently be an independent one. They could not be accused of unworthy motives. They could not be calumniated, and their evidence would not be disparaged by groundless charges of partisanship.

The report of such surgical assessors would necessarily be final. It could scarcely be successfully disputed by those medical witnesses from whose conclusions it differed. Hence it would be of paramount importance that none should be selected for such an important post as that of assessor who was not recognised as possessing not only a sound general knowledge of surgery, but such special experience in the diseases resulting from injuries of the cord and brain as to render his opinion worthy of all consideration in the eyes of his professional brethren. Such a plan would not interfere with the present machinery of the courts. The case would continue to be tried in the ordinary common law courts before a jury who would decide on all its facts. Their judgment and that of the Court would be guided in all matters of scientific opinion either by a conjoint surgical report, or if that cannot be arrived at, by the written statement of competent surgical assessors, who having had free access to the plaintiff and to the medical reports on both sides, could arrive at a definite and unbiased conclusion as to the nature, extent, and probable duration of his injuries and their consequences. It would, I venture to submit, be in the highest degree advantageous to the medical as well as to the legal profession. The great inconvenience of the system of indiscriminately subpœnaing medical practitioners who were but little concerned in the case would be stopped; conflict of medical evidence would no longer occur. Engendered as it is partly by the want of proper understanding between the medical witnesses, and greatly encouraged by the want of due scientific knowledge on the part of the Court, it would not survive the necessity of both parties either making a conjoint report or submitting their differences of opinion to the arbitrament of skilled surgical assessors selected by the Court. And, lastly, the ends of justice would be attained with more certainty than they often are under the present system.

THE death-rate of London, which, in the four preceding weeks, had declined from 27·6 to 22·5, fell last week to 20·2, a lower rate than has been recorded in any week since October of last year. Whooping-cough, though less virulent than of late, maintains its bad pre-eminence as the most fatal of diseases of the zymotic class, 110 deaths being registered under that head, whilst 48 were attributed to small-pox, 33 to measles, 24 to scarlet fever, 9 to diphtheria, 14 to different forms of fever, and 7 to diarrhœa. The mortality from diseases of the respiratory organs continues to decrease, 225 deaths being attributed to this class of maladies.

ON THE SURGICAL TREATMENT OF INTESTINAL OBSTRUCTION, WITH TWO CASES OF ENTEROTOMY.

BY THOMAS BRYANT, F.R.C.S.,
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(Continued from p. 675.)

Chronic intestinal obstruction now claims attention, and it is to be observed *in limine* that the clinical history of these cases is very distinct from that of the acute; for whereas in the latter the symptoms appear, as a rule, suddenly in patients who have been apparently in good health, in the former it will almost always be found that there has been for a more or less lengthened period some abdominal pain or symptoms: some difficulty in obtaining a movement of the bowels or in the act of defecation—some discharge probably of glairy mucus, of pus or of blood, separately or combined, at uncertain intervals; and last, but not least, some change in the form and character of the stools, the motions at one time being liquid and loose, at another hard and marble-like, while at intervals they are pipe- or tape-like. Under all circumstances there will have been symptoms of long standing, and if more acute symptoms exist when the case comes under notice they will be found to have been grafted upon the old.

If, then, we are called to see a patient suffering from marked symptoms of intestinal obstruction of some days' duration, and obtain such a history as has just been sketched, and find him with abdominal tympanitic distension, and probably pain, possibly visible peristalsis, nausea, vomiting, hiccough, and borborygmus, we may safely come to the conclusion that the case is one of chronic obstruction which has for its cause one of those named in our table: that it is either stricture of the colon or rectum; the mechanical pressure of a pelvic or abdominal tumour, hydatid, ovarian, or cancerous; the matting together of the intestinal coils, from old or chronic inflammation of the peritoneum or mesentery, or from cancerous disease; or last, but not least, to fæcal accumulations, and in every case of obstruction the possibility of this last being the cause should be borne in mind. Rare instances are also on record in which other causes have existed, and I have given some in my work on Surgery, in the chapter on Hernia, in which the obstruction has been clearly traced to the influence of an adhesion between the bowel and a hernial sac, or some part of the abdominal parietes, or to an obstructed obturator or other hernia.

Now the effects of obstruction, from whatever cause, are very uniform, and terminate fatally—from either exhaustion or peritonitis—if the obstruction is not overcome. The *chronic* peritonitis is directly due to the obstruction; and the *acute* to either a perforating ulcer of the sigmoid flexure, secondary to the stricture; to some ulceration of the cæcum or colon, the result of the over-distension; or to the mechanical rupture of the cæcum, the direct result of the pressure of the fæcal accumulation acting backwards upon the cæcal cul de sac. My notes describe two cases in which the cæcum burst: one in which it was purple in colour and measured fifteen inches round, and another in which it had sloughed. I have also the notes of a case of a male child born with an imperforate rectum, who died on the ninth day from ruptured cæcum. And out of eleven consecutive fatal cases of untreated stricture of the rectum, collected by my dresser, Mr. Russell, from the post-mortem records of Guy's Hospital, death was caused by ruptured cæcum in three, by perforation of the sigmoid flexure in two, by peritonitis following capillary puncture to relieve flatus in one, and by exhaustion in three. Hence the importance of early relief before these changes have been started. These points have been ably brought out in Coupland and Morris's paper.

To diagnose the true cause of the obstruction is, therefore, the surgeon's next aim, and it would be well if I were able to add that the task is an easy one, but such is not the case. It is true, when the obstruction is in the rectum, that a digital examination of the part may find it out; when in the sigmoid flexure, that the cautious introduction of the whole hand into the rectum (after the method of Simon of Heidelberg) may detect it, and that when a tumour is to be felt by palpation to the left of the umbilicus, through the abdominal walls, the probability is suggested of the disease being in the colon; but without these guides little definite knowledge is to be obtained by either palpation or percussion, by the passage of the long tube or by the amount of fluid that may be injected into the colon. Under these circumstances, therefore, the surgeon is thrown back upon the probabilities of the case as read by the light of pathological knowledge, and it is gratifying to be able to show that these facts speak with no uncertain sound. Indeed, they speak so strongly and decidedly that the surgeon may rely upon them with confidence, and base his practice upon their indications. The facts are revealed in the table to which I have already drawn attention. There it will be seen that out of the seventy-six fatal cases of chronic obstruction, three were due to fæcal impaction, three to the mechanical pressure of tumours, twenty-three to what Dr. Fagge described as "contractions" caused by the matting together of the intestinal coils from peritoneal or cancerous disease, and forty-seven to strictures of the bowel.

Now, cases of fæcal accumulation no not require any lengthened treatment in this paper. When they come under the surgeon's care as examples of obstruction they are to be treated by the mechanical removal of the fæces from the rectum by such means as the finger, the lithotomy scoop, or the handle of an iron spoon, these measures being aided materially by the free use of grease, oily enemata, and medicines. The fact that fæcal accumulation may give rise to the worst symptoms of mechanical obstruction, and even to death, should always be before the surgeon, and induce him to examine the rectum with care in all probable cases. Obstructions due to the presence of some abdominal tumour, hydatid, cancerous, ovarian, or otherwise, are to be diagnosed and dealt with on their own merits, although, when it is the lower part of the bowel that is obstructed, right or left lumbar colotomy should not be neglected when other means of relief are not available. I have performed this operation on several occasions from such a cause with gratifying success.

We come now to the two larger divisions of cases—viz., those of *stricture* and of *contractions*, and I trust to be able to show you that these cases have as distinct a clinical history as they have a pathology, and that they moreover require a distinct line of treatment.

With respect to their pathology it may at once be stated that "contraction" is the cause of chronic obstruction of the small intestines, and stricture of obstruction of the large bowel. That the cases of "contraction" are due to the matting together of the intestinal coils from more or less diffused inflammatory or cancerous peritoneal disease; while cases of stricture are due to a local narrowing of the bowel from disease of its coats. In the cases of "contraction" the action of the intestines (small or large) is interfered with from adhesions, or from a bending or doubling of the bowel upon itself, and consequently there is an interference with the peristaltic movements. In those of stricture the action of the bowels is prevented from the direct mechanical obstruction occasioned by the stricture.

The clinical history and symptoms of these two classes of cases consequently differ. In the case of "contraction" the symptoms are clearly referable to a difficulty in the passage downwards of the intestinal contents, in those of "stricture" to a difficulty in defecation. In the former case the symptoms are attacks of griping colicky abdominal pain, irregular and incomplete intestinal evacuations, and the painless discharge of healthy motions. In the latter there is mostly an absence of abdominal pain beyond that due to distension, more or less complete constipation alternating with looseness of bowels, the occasional or frequent mixture of mucus or blood with the motions, and painful defecation. In "contraction," when sickness exists it will be passing, and lasting only during the attack of colicky pain. In "stricture" it will occur towards the close of the disease, when the obstruction is more complete. In "contraction" the abdomen probably will not be much distended, and, if it be so, only during the attack. The distension, moreover, will be central and hypogastric. "The intestines will then," writes Fagge, "be seen writhing and coiling, and a gurgling of fluid is heard. There will also be visible distinct peristaltic movements of the intestines." In "stricture" the abdomen will to a certainty be distended, and the distension will be lumbar and epigastric. Large coils of distended bowel will also be visible, with peristaltic movements, the visible peristalsis in both cases being due to the chronicity of the

affection, and consequently to the hypertrophy of the bowel from overwork.

The following table may possibly be of use as an aid to diagnosis.

A HELP TO DIAGNOSIS IN CASES OF ABDOMINAL OBSTRUCTION.

—	ACUTE— Obstruction or Strangulation.	CHRONIC OBSTRUCTION— From Disease of Large Intestine.	CHRONIC OBSTRUCTION— From Disease of Small Intestine.	ACUTE OR CHRONIC— Intussusception.
Previous condition of subject	In good health.	Ailing for some time with abdominal symptoms.	Ailing, with previous attacks of incomplete obstruction.	In good health.
Mode of attack	Very sudden and acute.	Symptoms gradually increasing in severity, or acute grafted upon old.	Paroxysms of colicky pain, upon old symptoms.	Sudden onset, and increasing when acute, subsiding when chronic.
Early symptoms: Pain	*Abdominal pain* — fixed, central, and paroxysmal.	*Pain* diffused and increasing with distension.	*Pain*—paroxysmal, with intervals of ease and hypogastric.	*Pain* fixed, and often relieved by pressure.
Vomiting	*Vomiting* rapidly becoming fæcal.	Intermittent and fæcal towards the last.	Occasional during attack of pain.	Rapidly becoming fæcal in acute cases, absent or intermittent in chronic.
Collapse	*Collapse* very marked.	Absent till the end.	Absent till late.	Very marked in acute cases, not so in chronic.
Constipation	Absolute constipation and inability to pass flatus.	Gradually increasing in severity.	Attacks of constipation, alternating with natural relief.	Occasionally present, but as a rule "dysenteric" symptoms, straining, tenesmus, muco-sanguineous stools, or hæmorrhage.
Abdominal distension ..	Rapid and severe, central and hypogastric.	Gradually increasing, lumbar and epigastric.	Never great, increased during attack.	Rarely severe.
Manipular indications ..	Tympanitic; distended coils at times to be felt.	A fixed swelling at times to be felt in either iliac fossa.	A doughy condition of bowel, becoming knotty during attack.	Distinct tumour often to be felt, its shape varying during attack.
Visible indications	Abdomen tense in umbilical and hypogastric regions, with visibly distended coils.	Abdomen broadly distended; coils of intestine visible.	Coils of intestine very visible.	Nothing marked to be seen.
Peristalsis	Rarely visible.	Marked.	Very marked.	Not visible.
Urine	Scanty or suppressed.	Natural in quantity.	Natural.	Natural.
Rectal examination	Lower bowel probably quite empty.	Stricture of bowel may be felt in rectum or in sigmoid flexure by manual examination.	Nothing abnormal.	Rectum may contain mucus or invaginated bowel.

Such, then, are the broad points of distinction between the two large classes of cases of chronic intestinal obstruction, and they are enough to guide the surgeon in his practice. At times, however, the distinctions fail. Indeed, when the history of a case of either contraction or stricture is deficient, the diagnosis is most difficult; and, if seen when the symptoms are at their height, one or other may be mistaken for cases of acute obstruction. The chronic symptoms (of which nothing can be known) having lighted up into the visibly acute, in the same way as a case of incarcerated or obstructed hernia, may suddenly develop into one of acute strangulation.

Having thus mapped out the chief points of distinction between the two classes of cases of chronic intestinal obstruction, and bearing in mind that in the contractions the small intestines are the parts that are involved, and in the strictures the large, it remains for the surgeon in the latter class of cases to determine the seat of the disease, for a correct knowledge upon this point is clearly requisite before any precise operative treatment can be entertained. On reference to my table, this point comes out very strongly, for, out of 104 cases which have been tabulated, including Guy's and the Middlesex Hospitals cases, in 78 the disease was in the sigmoid flexure or rectum, in 19 it was in the colon or one of its flexures, and in 7 it was about the cæcum. In three-fourths of the cases the disease was consequently below that point of the bowel that would be opened by left lumbar colotomy, and in about one-fifth by right. In but a very insignificant number was it higher up.

With these hard, indisputable facts before us, the conclusion seems inevitable that in all cases of obstinate constipation due to mechanical obstruction in the large intestine, when medicinal treatment has failed, and the removal by any operative measures is out of the question, instead of wasting valuable time by the persistent administration of aperients which must do harm, of enemata which can do no good, or of opium and allied remedies, which may mask symptoms and mislead the practitioner, colotomy should be performed—in the *left* loin when the diagnosis has been made of disease of the rectum or sigmoid flexure, and in the *right* when the exact position of the stricture cannot be determined; for from our table it would appear that in not one case in fifteen is it likely to be above this point. Right lumbar colotomy also, so far as the relief it gives, is as satisfactory an operation as left. It must be stated, moreover, that this relief should not be postponed too long, because, from the facts alleged, the operation will be of little avail when, from the mechanical effects of fæcal distension, a peritoneal inflammation has set in, or changes have taken place in the cæcum or large intestine.

With respect to the treatment of *contraction*, much may be done by judicious medical means, more particularly by helping the passage onwards of the contents of the intestinal canal by means of laxatives, those of an oily kind being the best, such as the mistura olei of the Guy's Pharmacopœia. A time will, however, come when these means will fail, and others must be looked for, unless the patient be left to his fate; and of these "enterotomy" is most applicable. The operation consists in the opening of the small intestine in the right or left iliac fossa, and so establishing an artificial anus. It is also applicable in all other cases of obstruction, chronic or acute, where the weight of evidence in the former suggests the probability that the stricture or obstruction is above the ascending colon, and in the latter where the operation of "laparotomy" is set aside, either from some uncertainty in the diagnosis or want of consent.

(To be continued.)

CASE OF ABSCESS OF THE CEREBELLUM BURSTING INTO THE EAR, WITH IMMEDIATE DEATH.

BY G. C. GRIBBON, M.B.,
SURGEON-MAJOR, ARMY MEDICAL DEPARTMENT, IN MEDICAL CHARGE OF THE 25TH REGIMENT.

PRIVATE McV——, aged twenty-two, a stout young soldier, of excellent physique, and not in hospital before, was admitted on the 3rd November last, complaining of severe headache and pain in the right ear. He had a suffering look, and said his ear had run for some time. Got it, he thought, by using the plunge-bath too much. There was a trace of purulent discharge in the ear. Pulse 70, full. Ordered a purge, and three leeches to the mastoid process.

Nov. 4th.—Head aching badly; bowels very torpid; a

little numbness of right side of face; pupils natural. Calomel and jalap purge, and, if necessary, an enema afterwards; six leeches to the temples; ear to be gently washed out with a lotion of zinc and carbolic acid. It should be noted that the membrana tympani was found destroyed by ulceration.

5th.—A little easier; very little action of the bowels. Pulse 70, hard; temperature 101·8°. Grey powder two grains, James's powder three grains, every third hour. Milk diet.

6th.—Headache very persistent and most acute over the occiput; he tries to obtain relief by pressing this region firmly with his hands. A tendency to vomiting present. Powders to be continued; three leeches behind the ear.

8th.—Headache increased; muscular power failing. Yesterday he got up, and was found in the verandah, smoking; to-day he has to be helped to the close-stool. Bowels continue torpid. Pulse as before; temperature 100·8°; face natural; pupils unaffected. Head to be shaved; six leeches applied; afterwards cold lotion. Another active purgative required; calomel and jalap ordered.

9th.—Pain remitted yesterday afternoon, but is now worse than ever. He is quite sensible and quiet, but with a pale distressed look. Motor power of lower limbs almost gone; upper comparatively unaffected. A very slight action of the bowels was obtained yesterday. Pulse 60, hard; temperature 100·6°. Six leeches to vertex. Two grains of calomel and two of James's powder every second hour. Evening: Headache distracting; temperature 100·4°. Six more leeches to head.

10th.—At morning visit found him unconscious and breathing stertorously. According to the attendant's report he was talking "foolishly" in the early part of the night; asking for a pipefull of tobacco, &c., and about 3 A.M. fell into this heavy snoring sleep. His pupils were moderately dilated and perfectly insensible to light, as was the ocular surface to the touch. There was little or no rigidity of body. Teeth were firmly closed, but not clenched. Legs somewhat stiff; arms without a trace of this. Pulse had exactly doubled in frequency from yesterday, being now 120, and sharp. Face and surface generally were pale and without any shade of lividity—in fact, there looked so little amiss with him that the hospital apprentice, who saw him in the early morning, thought he was only sleeping heavily. And now followed circumstances which were certainly unexpected. Some ounces of turbid urine of faintly alkaline reaction had been drawn off, after which I directed a powder of the sort ordered the day before to be placed on his tongue. To do this his head had to be slightly raised and teeth unclosed, which was effected as gently as possible. Hardly had his head been placed on the pillow again when a gush of purulent fluid came from the ear, and straightway he became of a livid cadaverous hue. The change was startling. The pulse immediately gave signs of failing, and he was dead in little more than a minute.

At the autopsy, twenty-four hours after death, nothing unusual was noticed in the condition of the membranes, the superficial vessels, or of the cerebral substance. This last was sliced off in sections from above. On the ventricles being reached they were found partly distended with clear, or rather opalescent fluid. On slitting up the tentorium the surface of the cerebellum close to the right auditory meatus was seen to be discoloured, and pus to be lying between it and the bone. On examining the cerebellum, all of the interior of the organ except about the anterior third of the median and left lobes was found to be an abscess of an extremely fetid character. It appeared to have begun in the right lobe, of which nothing was left but the cortex, as here it was encased in a thick limiting membrane, while in the other lobes to which it afterwards penetrated there was no such membrane of demarcation, but it was as if the cerebellar substance were being rapidly broken down in every direction. At a point corresponding to the auditory meatus the cortex of the right lobe was ruptured, so that the contents of the abscess could escape freely through the aural canal, there being no membrane to stop the way. For a quarter of an inch around the meatus the bone was denuded of dura mater and stained with pus, which also abounded in the mastoid cells.

A few remarks in conclusion. I think there is very little doubt that the sudden death in this case was due to shock from the rupture of the thin shell of cerebellar cortex which formed the abscess-wall, and the discharge of its contents through the ear. I feel equally sure that the moving of the man's head in order to administer the powder was the direct cause of the rupture. The sudden entry of air into such an important region, and the outflow of fluid, coupled with the consequent changes in conditions of pressure on the adjacent nerve-centres, were the main factors, I should suppose, in producing so intensely depressing an effect as to cut off from the heart its supply of nerve-force in a moment.

It may be also worth while to note what will strike most who read the case—i.e., how extensive this cephalic lesion was, almost annihilating a large centre of nerve-force, and yet how, until the very last moment, there was so little to indicate its existence.

Judging of its age by the post-mortem characters, there seems no question but that the abscess began to form whilst the man was at the routine of military duty. On his reporting sick, which was a week exactly before his death, he said he found "his head getting too dead to let him hold up any longer." Not till three days after this (three before his death) did any failure of muscular power manifest itself. This failure I should say, as I observed it at the time, was one of the power itself, and not of the directing or co-ordinating faculty merely. I must add, however, that in the matter of this distinction I made no special inquiry during the progress of the case, for I never suspected the disease to exist where it did, but rather anticipated finding an abscess in the cerebrum.

I believe the man to be perfectly right in imputing to the plunge-bath his earache, &c. As a sanitary measure the plunge-bath in India is, of course, valuable. No one will dispute this, but at the same time, if incautiously used, it is not without its drawbacks. Greatest, perhaps, among these is its tendency to generate ear affections, and, as might be expected, men fond of diving are the principal sufferers. Their ears are tried, first by repeated immersions, and subsequently by the cold produced by the rapid evaporation of the water left in the ear-passages. In the dry hot season the degree of cold so caused is very considerable and rapid in occurrence. The membrana tympani becomes slowly weakened and congested, and in time a low form of inflammation is set up. There is not much pain, and any discharge there may be is trifling, and so things go on from bad to worse till the continuity of the membrane is destroyed at some point, and in the majority of cases that present themselves this event, unfortunately, is found to have already occurred. Prevention is possible if only soldiers could be taught to be a little careful.

It has been a standing order in the regiment of which I have medical charge that men should not stay in the bath more than ten minutes. This period, however, is estimated very liberally by those fond of the water, as the non-commissioned officer who is responsible is not, in general, the owner of a watch. Also, with a view to minimise the chance of contracting these affections, I recommended men given to diving to keep some cotton-wool in their ears while in the bath. Some do this, but the majority forget, or are too careless to take the trouble. Lately the surgeon-general, Dr. James, has drawn attention to the necessity of a strict supervision of these baths, and in consequence a general order has been published, enjoining commanding officers to be most careful that no man bathe more than once a day, nor remain longer than ten minutes in the water. The subject being thus invested with its proper importance, a strict enforcement of these rules will now be the case.

THE RELAPSE OF STONE IN THE BLADDER AFTER LITHOTOMY.

By CHARLES WILLIAMS, F.R.C.S.,
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AT a recent meeting of the Royal Medico-Chirurgical Society a very instructive discussion followed the delivery of Sir Henry Thompson's elaborate and interesting paper on the subject of stone in the bladder. Allusion was made to the rarity of a recurrence of that disease, and Mr. Cadge referred to twelve cases of relapse recorded by the late John Green Crosse in 704 patients operated on for stone at the Norfolk and Norwich Hospital.[1]

Mr. Crosse's table of relapses is, in many particulars,

[1] A Treatise on the Formation &c. of the Urinary Calculus; by J. G. Crosse. 1841.

incorrect, principally in the omission of *three* cases. The addition of these to his twelve makes the actual number *fifteen* which presented themselves from the opening of the institution in 1772 to 1834—the year in which Mr. Crosse compiled his table. The proportion of relapses therefore should be, one in every *forty-seven*, instead of one in *fifty-eight*. Since the latter year, fourteen additional cases have occurred at the Norwich Hospital. This makes a total of twenty-eight relapses in 1015 operations[2] between 1772 and 1869—a period of ninety-seven years; and gives a proportion of one in thirty-six, or, in 935 lithotomies (lateral and median), one in thirty-three.

An analysis of these cases[3] shows that lithotomy was performed a second time in twenty-four patients, a third time in three, and a fourth time in one. Twenty-three were cured; five died; five had stone a third time, of whom four were cut and recovered, the fifth was deemed unfit for operation. All the patients were males; no instance of recurrence having shown itself in the female.

Three of the cases recurred before six years of age; six under ten; two between ten and twenty; two between twenty and thirty; four between thirty and forty; two between forty and fifty; three between fifty and sixty; eight between sixty and seventy; and seven between seventy and eighty. One death occurred under forty, and four above that period of life. The former (thirty-eight years of age) died on the seventeenth day, the cause being unrecorded. Of the latter, one, aged forty-seven, died on the twentieth day, cause unknown; the second, aged sixty-five, died on the fifth day, cause unknown; the third, aged seventy, died of exhaustion on the seventy-fourth day; and the fourth also died of exhaustion on the fourteenth day.

In seven cases the second operation took place within one year from the date of discharge from the hospital; in nine, within two years; in four, within three years; in three, within seven years; in two, within nine years; and in one, within twelve years. The average period of recurrence in twenty-eight cases was twenty-seven months.

Lithotomy was performed three times in four cases: in two of these at the expiration of eleven months from dismissal; in one, fifteen months; and in the fourth, thirty-four months. The lateral operation was adopted twice in eighteen cases, and three times in two cases. The median preceded the lateral once in one patient, and twice in another patient; in five instances the lateral preceded the median. One patient was cut twice by the median plan, and another patient once by the lateral and twice by the median, and one patient twice by the lateral and twice by the median. The operation was performed in all the cases along the original seat of the incisions, and without difficulty. One man had undergone lithotrity twice previously to the first lithotomy, at an interval of twenty-eight months. Thirteen months intervened between the last lithotrity and the first lithotomy. Eight cases terminated in fistula—some rectal and others perineal; two of these were cured by the second operation.

In eighteen cases the calculi were removed in an entire condition; in eight they were broken previous to extraction. In two instances the stones were small and numerous, some of which were broken and others perfect. In one case a sacculated calculus was left undetected in the bladder, and removed with a loose one at the second operation. The largest recurrent stone weighed three ounces and five scruples, the interval being a hundred and eleven months. The smallest recurrent stone weighed six grains, the interval being seventy months. In one of the cases which relapsed, under six years of age, the weight of the calculus was 210 grains (three drachms and a half), the intervening period being fourteen months; in a second child, 150 grains (eight scruples), the interval being twenty-four months. In both cases the calculi were removed entire at the first operation. It does not appear that the calculus removed at the second operation is necessarily of the same character, in all cases, as that removed at the first: in nineteen the second formation was of the same composition as the first, ten being composed of phosphates and nine of lithic acid and lithates; the phosphates succeeded the lithates in seven and the oxalates in two.

[2] Lithotrities and operations on females are included in this number.

[3] Vide Holmes's System of Surgery (vol. iv., second edition, 1870) for a detailed table of relapses, in which are given the age of each patient at the time of his first operation, the interval in months between the first and second operation, the weight and character of the calculi, and the result. One case, accidentally omitted, is now added to the above number.

The question of relapse after operations for the cure of vesical calculus is a very interesting one, and rarely alluded to by writers on lithotomy, and if alluded to is generally in so vague a manner that their remarks are of very little assistance to us.

From the records of operations performed at the Hôpital la Charité, Paris, between the years 1806 and 1831, we find that six cases of relapse presented themselves after seventy cases of lithotomy, or one in eleven. M. Civiale informs us that the proportion indicated by returns which he received from Bavaria is five in 162 operations, or one in thirty-two, from Bohemia one in forty-six operations, from Dalmatia one in forty-three operations. At the Luneville Hospital, the registers show thirteen cases of relapse after 1492 operations, or one in 116 cases. According to the returns received by M. Civiale from the whole of France, the proportion of relapses appears to be one in seventy-four cases, or thirty-two in 2368 operations; but of these latter 314 were cases of lithotrity.

With regard to lithotrity relapse occurs much more frequently than after lithotomy, though of recurrence after this operation it is not my intention to say anything in this communication beyond the fact that after 548 operations, Civiale found relapse follow in fifty-five cases, giving a proportion of one in every ten patients.

The great question which interests us most is the actual cause of the return of the disease. This may take place under two circumstances: fragments may have been accidentally left in the bladder and become the nuclei of subsequent formations; or the relapse may depend on the same constitutional disposition which gave rise to the first calculus. The latter cases are simple recurrences of the disease, and cannot be connected with the operation, but in the former we may attribute the accident in a great measure either to the operator or to the method which he has employed.

Norwich.

SOUTH AFRICA AS A RESORT FOR PULMONARY INVALIDS.

BY HARRY LEACH, M.R.C.P.,

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MANY circumstances have recently drawn public attention in a special way to our possessions in South Africa. Mr. Froude's semi-political excursions thither, the annexation of the Transvaal, and the still unsolved Zulu "difficulty," the Kafir war, the action of Sir Bartle Frere as to the Colonial Ministry, and his Excellency's efforts for the sanitary regeneration of Cape Town, have all made us interested in this quarter of the southern hemisphere. Mr. Donald Currie, by an active and wholesome rivalry, has diminished the length of passage for and increased the quality of comforts to those who travel to the Cape. Mr. Anthony Trollope, in a sketchy, and Mr. John Noble, in a matter-of-fact way, have given us an opportunity of learning many important particulars of a country very little known and, undoubtedly, in some respects, too little appreciated.

About six months ago, being compelled to cheat an English winter, I proceeded to the Cape, and determining (from former superficial experiences of South Africa) to give the country as radical a trial as could be made within the time, "trekked" up-country, and passed through Cape Colony, the Orange Free State, Griqualand West, the Transvaal, and Natal, stopping at places indicated by London physicians as peculiarly salubrious. This journey occupied nearly three months, a stay at Wynberg (about eight miles from Cape Town) with excursions to Ceres, Wellington, Stellenbosch, &c., altogether six weeks, and the ocean journeys six weeks. Every information was afforded by residents at all the places visited, with much hospitality, and I believe that a brief record of the practical experiences gleaned will be useful to the profession as well as to those of the public who must perforce be classed as pulmonary cripples. The report may be conveniently divided into two parts—(1) Experiences, (2) Recommendations.

The ocean journey to Cape Town, starting from London, Southampton, Dartmouth, or Plymouth, now occupies on an average from twenty-one to twenty-three days, and may be considered a fine-weather passage at almost all times of the year. It is hardly necessary to mention that the quick transit from cold or wet to the heat of the tropics is more or less trying to all invalids, and, in the majority of cases, usually results in loss of appetite, hectic, and sometimes hæmorrhage, and a slight exacerbation of the symptoms which have been prominent during the progress of the case. But the Donald Currie and Union steamships are excellently well fitted and found, and those who secure a deck cabin secure also quarters very well and amply ventilated. The patient arrives at the capital of Cape Colony, and on landing enters unfortunately the most insanitary city in South Africa. The town is described in the March number of the *Cape Monthly Magazine* as "under-drained, surface-drained, and in some places not drained at all; the underground drains are continually blocked, because there is not water enough to flush them properly, and the surface drains are as constantly choked, and so speedily become a nuisance both to eye and nose." All the hotels are of a very mediocre, and some of a most inferior, description. There are, of course, plenty of lodgings, but for the above reasons it is patent that Cape Town is, even for the healthy, by no means a salubrious dwelling-place, not mentioning the dust and winds with which it is infested at certain times of the year. What, however, in the majority of cases, does the patient do? He has received no specific instructions from home to avoid Cape Town, and so establishes himself here for days, weeks, or months, finding out, often only after a long term of residence, that there are two charming suburbs of the city, east and west, where the entire climate and all its surroundings are the very antitheses of those that obtain in the city itself. There is the sea suburb (Green and Sea Points), and the western district behind the mountain, where the scenery around Wynberg and Constantia may fairly be classed as the garden of South Africa. The air here during the summer is delightful. There are all varieties of hill, scrub, and woodland, and rides may be taken for miles through avenues of oaks and acres of vineyards, or along the seashore to Kalk Bay and Simons Town. But the district possesses only two hotels and two or three boarding-houses inadequate both in number and character to the wants of invalids, *who have been properly and systematically directed, in their search for health.* It happens, however, with perhaps the majority of invalids, that though not warned against Cape Town, they have been advised to go "up country." Natal is recommended in some cases, the Knysna in others, and so on. But it appears that Cradock and Bloemfontein are most generally prescribed, the former being 550 and the latter 680 miles from Cape Town. There are at least six ways in which land journeys may be accomplished in this country: (1) By post-cart (the most costly and the most uncomfortable), travelling night and day in a vehicle that in some parts of the country is not inaptly compared to a wine-case on wheels. (2) By coach holding from eight to ten people, drawn by four, six, or eight horses, and a marvel of strength as to springs and axles, in spite of the mishaps that occur occasionally. You are compelled to spend from eight to thirteen hours a day in this vehicle, or stop a week at some fearful roadside inn for the next; so that if the entire journey lasts, say, five days, and the coach is full, much discomfort, not to say misery (to a sick person), must result. (3) By spring waggon with mules or horses, all of which, as well as outfit, must be bought, and boys hired to look after them. (4) By ox waggon, with from twelve to sixteen animals. The former of these last-named conveyances will allow the accomplishment of about thirty miles a day, if the animals are well attended to; and the latter about fifteen miles daily. In both these cases provisions are taken, and you camp out—"outspan," as it is called—independent of hotels (there are no "inns" in South Africa). (5) By private Cape cart, with four horses, accomplishing about thirty miles a day. (6) By transport waggon; buying a waggon and oxen, and loading it with merchandise on your own account, or hiring half a waggon for your own accommodation: progression in this case will not average much more than twelve miles a day. These particulars are stated *seriatim*, in order to show that much consideration should be given to the mode of travelling. All modes except by ox waggon are expensive, but categorical particulars on this head will be given in the next article.

The roads, however, form a much greater element of discomfort than the vehicles. Mr. Froude, Mr. Trollope, and other writers on South Africa have said something about them; but, having had experiences of Indian, American, Turkish, and fen roads, it is difficult to convey any idea of the exquisitely uncomfortable and painful sensations endured by travellers in Cape Colony and the other districts in a greater or less degree. Robust men grumble, and with good cause; but these remarks are of course supposed to be made from an invalid's point of view. The accommodation on these roads is, in many cases, as bad as the roads themselves, and in some particulars excessively objectionable to any middle-class person, whether well or ill. Ill-cooked food, two and three bedded rooms, very costly and very bad drinks, and filthy sanitary arrangements are in the Orange Free State, the Transvaal, and many parts of Cape Colony, the rule rather than the exception. And at places specially recommended as health resorts, the same grave defects exist. There is usually but one hotel at all habitable, and absolutely no lodgings. This hotel has many of its bedrooms arranged round the stable-yard, in close proximity to the horses, the manure heap, the invariably stinking latrines, the kitchen, and the chattering native servants. As all rooms are double or treble-bedded, you are liable at any time to have a companion, who may or may not be eligible. The *table d'hôte* scheme prevails universally, and though the servants are, as a rule, civil enough, there is no sort of machinery for increasing the comfort of an invalid, or one with a capricious appetite. There are, as a rule, no private rooms. Continual bar-drinking is one of the curses of the country everywhere, and it may be readily imagined that, under circumstances of idleness, the proximity of this practice is undesirable. Minute carnivora of one or other description abound in the bedrooms, and during the hot weather, flies and (in Natal) mosquitoes combine to worry.

We may now glance at the sort of "up country" that appertains to South Africa, our possessions there, be it remembered, occupying about as much superficial area as the Continent of Europe, so that a great variety of scenery and temperature exists. The quickest way to reach the upland country from Cape Town is by steamer to Port Elizabeth, a very busy, but by no means salubrious place. Uitenhage is a pretty and well-watered village, about an hour out by railway, and, having seen it, the traveller proceeds by railway to Alicedale, eventually reaching Graham's Town, over three hours of one of the most execrable roads in the colony. Graham's Town is 1750 feet above the sea-level, and forms a pleasant half-way house, where lodgings can be obtained, but where double-bedded rooms prevail, even at the best hotel. The journey upwards to Cradock occupies about twenty-one hours by post-cart, passing through Bedford, a charming little place, enclosed towards the north and east. The road between Bedford and Cradock runs in many places along the banks of the Great Fish River, and is inexpressibly bad. Cradock, 3000 feet above the sea-level, is very much extolled as a health resort, and the air is certainly very pure and clear, though the summers are mostly hot. There is a fair supply of water, and some few trees about the town, which contains some capital gardens. But there is no adequate accommodation for invalids, and you run a risk at the hotel, among other things, of being stowed away in a sort of triple bedroom, each room communicating with the others, and each accommodating two or three persons. Adequate ventilation under these circumstances is, of course, quite impracticable. Most of the country around is unspeakably monotonous, and the dreariness increases as you proceed northwards through Middleburg and Colesberg to the banks of the Orange River, which separates Cape Colony from the Free State. You travel over miles of undulating plain, entirely devoid of trees or shrubs, varieties of birds and buck being seen at intervals. There is some excitement to a novice in crossing streams at the drifts, for considerable care is required to prevent accidents, and delays in the rainy season are inevitable and frequent. The roads in the Free State, after crossing the Orange River, are decidedly better; but the country between Bethulie and Bloemfontein, through Philippolis, Fauresmith, and Bethany is if possible still more dreary. It is, however, quite possible to sleep in a waggon or in the open air with impunity if you have made arrangements to do so. But in a long journey in this country water is often a difficulty. It is frequently scarce; the streams at which you halt are sometimes so muddy that you cannot bathe in them satisfactorily, so that one of the desirable adjuncts to camping out is often out of your reach.

Bloemfontein, according to some authorities the Eldorado of health resorts, is a neat-looking quiet town of some 2000 inhabitants, 4750 feet above the level of the sea, and built in the centre of a plain bounded miles away by mountains. There is a bishop and a cathedral staff; and the former, as well as the members of the latter, spare no pains and take endless trouble to promote the comfort of visitors, invalid or otherwise. President Brand and the chief inhabitants, including the clergy of several other denominations, all combine to form a pleasant though very small clique of society, so that Bloemfontein has been called by some the most Anglicised place in South Africa. The Kafirs have their own location, and are kept in very good order. But here, again, the same conspicuous want of accommodation exists, and the same dreary prospect surrounds you. There are two hotels, framed according to the model described above; and no lodgings, houses being extremely scarce and rents very high. There are absolutely no extraneous resources of any kind, and those engaged in business have already, good-naturedly enough, taken into their employ more than a sufficiency of "pulmonary" clerks and assistants. This condition of things is somewhat disappointing, after a rough, expensive, and wearisome journey of more than 600 miles. But the air is undeniably splendid in quality, the water-supply is good, and, as Bishop Webb is building an establishment to be classed as a convalescent home for invalids, the want of some quiet anchorage will possibly soon cease to be felt. There are doubtless many cases of arrested phthisis now living in the town, and two or three special "cures" are invariably quoted by the inhabitants whenever the health question crops up. The coach to the Diamond Fields now goes through Bloemfontein *viâ* Queenstown, Dordrecht, Aliwal North, and Smithfield. The entire journey to Bloemfontein from Cape Town by this route occupies about ten days. Mr. Trollope and others say that the accommodation is fairly good along the road by this route—that is, I suppose, for a healthy person. It should be mentioned that there are two or three farmhouses near Bloemfontein, where, possibly, quarters might be obtained, and where milk, eggs, fruit, and vegetables are very abundant. I spent in this way a very comfortable week, and was most kindly entertained by Mr. John Beck.

The "grandeur of monotony" (quoting the remark of a Bloemfontein Church dignitary), may again be contemplated as you journey towards Kimberley. At the capital of the Diamond Fields very much better accommodation can be obtained, with ice, and several other minor luxuries. But potable water is scarce, and often very bad, the heat is great, nearly all houses are built of corrugated iron, and the dust is sometimes intense. But in spite of these disadvantages, it appears that the place, as a health resort, is quite equal to Bloemfontein, or other towns in the Free State, the indirect cause being doubtless that living generally is more comfortable, and that there is something to see, and, for those who choose to work, something to do. Crossing the Vaal, and so entering our recently acquired possession, the Transvaal, you find a fertile country, with plenty of orchards and scrub, many trees in some places, a lovely climate, and intensely bad travelling and accommodation. The *ne plus ultra* of nastiness as to food &c. is reached at the roadside inns, and minute vermin here have it all their own way. At the houses of the Dutch Boers you are entertained with rough-and-ready courtesy, plenty of milk and eggs being always obtainable. Good water is abundant almost everywhere, and if a patient could take his home comforts with him to the Transvaal, he need want no more salubrious location.

Our most eastern South African province is very fitly called Fair Natal. Although the higher districts are, in some parts, bleak and barren, much of the country is very well wooded and watered, possessing some delightful mountain scenery. The roadside resting places are immeasurably better than any in Cape Colony, the Free State, Griqualand West, or the Transvaal, resulting from the fact that Natal is far more thoroughly anglicised than any of the other provinces. But except in the upland districts the summer temperature is very high, and the air is less dry than that of the other provinces. Pietermaritzburgh, the capital, is a comparatively comfortable place of residence, where good and quiet accommodation can be obtained. The same may be said of Durban, the seaport of Natal, which, though possessing lovely surroundings, where all kinds of so called hot-house fruits grow luxuriantly, is yet objectionable for invalids, except during two or three months in the winter, on account of its moist heat.

It will be observed, by looking at the map, that a large district, comprising extensive tracts of country between Natal and Cape Colony, called Kaffraria, has not been commented upon at all, because the unsettled state of the country places it quite beyond the range of invalids. The west country is said to be healthy, but is almost uninhabited. The Great Karroo, through which passes the high road from Cape Town to the Diamond Fields, has a dry air, but almost no water. Whereas the southern districts, including the Knysna (sometimes strangely recommended to invalids), are either too low or too much wooded to be specially healthy, though they are all fairly accessible.

(To be concluded.)

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

REMARKS ON NON-PROTRUSION OF THE TONGUE IN SOME CASES OF APHASIA.

(By Dr. HUGHLINGS JACKSON.)

RESPECTING this interesting and curious clinical phenomenon Dr. Hughlings Jackson remarked:—

It will have been noticed by every medical man that some patients who have loss or defect of speech do not put out the tongue when they are asked. For the present we shall consider cases of *loss* of speech. The patients know what is wanted; they do the preliminary thing—opening the mouth,—but very often the tongue lies flat and motionless in the floor of the oral cavity. The patient may put his fingers in his mouth to help the organ out. That the tongue is not paralysed (we mean in the ordinary medical sense of the term paralysis) may be proved in several ways. As a rule, the patient, who can *say* nothing, can *utter* something; he has a stock word or phrase which comes out at any time. This is best called a "recurring utterance." The word or phrase being clearly articulated is decisive evidence that the tongue is not paralysed. Then there are in some cases "occasional utterances." The patient may swear, or get out more innocent ejaculations, as "Oh dear!" These also are clearly articulated. Yet very early in a case of loss of speech there may be no sort of utterance. Then we can demonstrate that the tongue is not paralysed by getting the patient to eat and drink. He will eat and swallow quite well, which he could not do were his tongue paralysed. Again, after failing to put out his tongue when he tries, the patient may stick it out well to lick his lips. In one case an aphasic woman was vainly urged to put out her tongue. Mr. Lewis Mackenzie, the resident medical officer, got it out by a trick: he had found that after drinking she would stick her tongue out to lick her lips; she did so on this occasion.

This is a matter of great importance. In some cases of acute cerebral disease the non-protrusion of the tongue would be of great value in helping to the diagnosis of aphasia, as one symptom of that acute disease. In any case it would be a great blunder to suppose there to be paralysis of the tongue from disease of the lingual nerves or their nuclei in the medulla oblongata, because the patient did not put out his tongue when asked and when he tried. It is a thing of great scientific interest; considered along with some other symptoms of aphasia, it gives us a clue to the physiology of the whole of aphasia. Let us mention some other symptoms of fundamentally like significance.

Those who have examined the eyes of many aphasics will remember cases in which the use of the ophthalmoscope was very difficult; some aphasics do not, and apparently cannot, direct their eyes as they are told. Of course in some cases of aphasia there may be for a few hours or days, or in rare or severe cases for several weeks, lateral deviation of the eyes from the side paralysed, as part of the hemiplegia; but we just now refer to chronic cases in which there is no ordinary

affection of the ocular muscles; the difficulty is not in looking to one side in particular. Indeed, we see the same sort of thing in some people whose nervous systems are sound. Some people are unable to draw in their breath deeply when told to do so during stethoscopic examination; we have to tell them to cough. It is next to impossible to get some patients to frown (as in suspected one-sided facial paralysis), even if we make a frown for them to imitate. Returning to aphasia. The Recurring Utterance is often "Yes" or "No," or the patient may be able to utter both these words. Some of these patients can utter "No" emotionally, and some can do this and can also reply with it (use it propositionally). But of those who can reply with it there are some who cannot say it when told. After failing to get them to say it when told, we can easily get the word out as a reply to a question requiring dissent. Similarly of Occasional Utterances of less automaticity: a patient may swear well on proper (scientifically proper) occasions, and yet be unable to repeat the ejaculation or any word of it. The same applies to Occasional Utterances of still less automaticity, as is illustrated by the following excerpt from an unpublished paper by Dr. Hughlings Jackson written ten years ago:—"I have seen a patient who usually sat up in his room, whose face looked intelligent, who was cheerful and merry, and who seemed to understand all that I said to him, but who could not put out his tongue when he tried. His daughter remarked that he could put the tongue out, as she expressed it 'by accident,' and added, as an illustration of her meaning, that when anyone was leaving him he could say 'good bye,' but that he could neither put out his tongue, nor say 'good bye' when he tried. He could say 'yes' and 'no' at any time; and, using the lady's expression, could say 'good bye,' 'well,' 'never' *by accident*. She further remarked that the patient would sometimes swear. He uttered the short explosive word which is so much in favour with English swearers, but he could not, she said, repeat the word when he tried. She asked him to utter the explosive sound when I was there, saying it herself for him to imitate. He laughed, and shook his head."

In some cases, where there is not loss but defect of speech, we see a similar sort of thing. The patient may get out a word, or even an elaborate phrase, and be quite unable to repeat it. This shows us that in our trying to appreciate an aphasic's condition, we have not only to note what he *utters*, but whether or not he can *say* (repeat) what he has uttered. We frequently find that he cannot. In some cases a patient gets out, in proper reply to a question, such a phrase as "I don't know"—one, be it observed, of considerable automaticity. Afterwards he may go on uttering it in rejoinder to questions to which it is irrelevant. The patient may show that he knows this by expressions of mirth or annoyance after its utterance. But sometimes we can stop such temporary Recurring Utterances by telling the patient to say "I don't know," or whatever the phrase may have been. They often fail.

All the above superficially different phenomena are fundamentally like; they all show a reduction to a more automatic condition.

NORTHERN HOSPITAL, LIVERPOOL.

CASES OF RUPTURE OF ABDOMINAL VISCERA FROM FALLS.

(Under the care of Mr. PUZEY.)

FOR the following interesting notes we are indebted to Mr. James Allan, house-surgeon:—

CASE 1. *Complete Rupture through Pylorus.*—D. M——, aged eighteen, was admitted at 8 P.M. on September 13th, 1877. About half an hour before admission he sustained an injury to the abdomen by a fall from a considerable height into a ship's hold. He complained of intense pain referred to a limited area on the borders of the epigastric and the right hypochondriac regions, and begged earnestly to be put to sleep. A small quantity of brandy administered to him caused immediate intense pain in stomach. He felt sick, but did not vomit, and was much collapsed. He was easiest when lying in the prone posture. Percussion and palpation indicated presence of air and fluid in abdomen. He died at 5 P.M. on the 15th, the second day after admission.

Necropsy.—On cutting through the abdominal wall, air escaped, and a large quantity of dark-coloured fluid with feculent matter floating in it occupied the abdominal cavity. There was complete separation of stomach from duodenum by a transverse rupture through the pyloric valve. Stomach quite empty, duodenum contracted at seat of rupture. No hæmorrhage, very little escape of bile; evidence of peritonitis by the presence of flakes of lymph on the intestines and a layer of lymph on upper surface of liver.

CASE 2. *Rupture of Liver, Spleen, and one Kidney.*—G. M——, a sailor, was admitted at 10 A.M. on December 19th, 1877. Just before admission, fell from the rigging a distance of forty feet, and was doubled up by abdomen striking some projecting body on deck. He was picked up insensible. He had pain all over the abdomen, but most severe in the right hypochondriac region. Decubitus dorsal, with thighs flexed on abdomen. Respiration mainly costal. Anything swallowed was immediately rejected. Catheter introduced showed bladder uninjured. There was dislocation of left clavicle at the scapular end.

Dec. 20th.—Bowels moved during night. No blood in stools. Experienced great difficulty in defecation, due to incomplete action of the diaphragm. No blood in urine. Died at 4 P.M.

Necropsy.—A small quantity of blood-stained fluid found in abdomen; no trace of peritonitis. The liver presented three parallel rents two and a half to three inches long, quite superficial, running antero-posteriorly on the upper surface of the right lobe; gall-bladder full. On the spleen, about the middle of its convex surface, were two superficial fissures about two and a half inches long, and running in the line of its short diameter. There were two small rents on the convex border of the left kidney, situated near each other and the centre, and along short diameter.

CASE 3. *Rupture of Spleen, Left Kidney, &c.*—P. B——, aged fifty, was admitted March 6th, and died in two hours. A short time before admission he fell into a ship's hold, a distance of twenty-five feet, striking the left antero-lateral aspect of body, and fracturing a large number of ribs on both sides of chest. He had extreme difficulty in breathing. Respiration diaphragmatic. No evidence of cerebral or spinal lesion. Died of asphyxia.

Necropsy.—The spleen presented two ruptures' each one and a half inches long, on the hilum aspect, and running along the short diameter of the organ near the middle line, and about quarter of an inch deep; also a superficial fissure three inches long on the convex surface. Spleen friable, twice usual weight. Considerable hæmorrhage round this organ. On the left kidney, near the hilum, there was a small pretty deep rupture running transversely; large amount of hæmorrhage. Bladder intact, contracted.

In this case, also, there was a rent in the pericardium, opposite the apex of heart, two inches long. There were also extensive ruptures of lungs from fractured ribs. In all there was fracture of eighteen ribs: eight on the right side and ten on the left. Those on the right side fractured in front of the angles, third to tenth inclusive; second to eleventh on the left, the second fractured in anterior third, all the rest in middle or junction of middle and anterior thirds; the third to ninth inclusive also fractured behind the angles. Collapse of left lung and hæmorrhage into chest.

NORTH STAFFORDSHIRE INFIRMARY.

STRANGULATED HERNIA RELIEVED BY OPERATION; RECURRENCE OF VOMITING.

(Under the care of Mr. SPANTON.)

FOR the notes of the following case we are indebted to Mr. W. A. Frost, house-surgeon.

Charlotte S——, aged thirty-nine, married, four children, was admitted Feb. 17th, at 12.30 P.M. Femoral hernia had existed on right side for three years. On several occasions there had been pain and difficulty in reducing it. She had worn a truss for two years. The hernia descended on the day before admission between three and four o'clock in the afternoon, and she was unable to reduce it. In the evening vomiting occurred, and recurred several times during the night. Taxis was employed by a medical man the same evening, and again on the morning of her admission. The bowels acted on the morning of the 16th.

On admission there was a rather tense swelling extending from the saphenous opening to Poupart's ligament; no impulse on coughing; over this the patient was wearing a truss. There was pain in abdomen. The pulse was small and weak; tongue moist, slightly coated in centre; temperature 99·4°.

Ice was applied to the hernia, and thirty drops of tincture of opium were administered. At 3 P.M. ether was administered, and gentle taxis employed. This failing, herniotomy was performed by Mr. Spanton. The sac contained about half an ounce of bloody serum, omentum, and a knuckle of intestine; the latter was congested, but retained its natural gloss. A tight constriction at the crural ring having been divided, the intestine and omentum were easily reduced. At 9 P.M. there had been no pain or vomiting since operation. Temperature 99·4°. Ordered a half-grain opium pill every four hours.

On the 18th the menses appeared. Patient slept at intervals through the night. At 9 A.M. she complained of pain in the lower part of the abdomen, but the abdominal walls moved freely in respiration. Temperature 100°; tongue moist. Throughout the day there were intermittent pains in the abdomen, but not of a severe character. At 9 P.M. the temperature was 100·4°.

She did not sleep much that night in consequence of pain, which recurred about every quarter of an hour and lasted two or three minutes, and next morning (19th) the temperature was 102°; pulse 130, weak. The wound was quiet. There was pain chiefly in right inguinal region, which was slightly tender. The abdominal walls moved freely and without pain on deep respiration. At 9 P.M. temperature 100°; pains rather more frequent. Fomentations ordered.

On the 20th, from 2 A.M. till 4 A.M., there was great pain in the right inguinal region, with tenderness. All bandages were removed, and ten leeches were applied, the after-bleeding being encouraged by fomentations. These measures gave great relief. At 9 A.M., temperature 101·4°, pulse 130. At 1 P.M. an enema of salt-and-water was given, followed by two rather free actions of the bowels. Subcutaneous injections of a quarter of a grain of morphia were substituted for the pills. There were several slight attacks of pain during the day. At 9 P.M., temperature 99·6°.

She had occasional pain during the night, but she slept well. At 9 A.M. the next morning the temperature was 99·4°. There was slight redness round the wound, and the lowest suture was removed. At 3 P.M. she vomited, and again several times in the course of the afternoon and evening, the vomited matter being fluid, of the colour of beef-tea (nothing but milk had been taken). Given ice to suck. At 9 P.M. the temperature was 100·4°.

She had a restless night, vomiting frequently; and at 9 A.M. on the 22nd the temperature was 100°; tongue moist, coated in the centre with a brownish fur; eyes sunken; induration round wound. All sutures removed, giving exit to a few drops of pus. Vomited about every quarter of an hour throughout the day.

On the 23rd the tongue was moist and coated; vomiting more frequent, the vomited matter being of a darker colour. The patient was free from pain; skin cold; pulse very weak.

On the 24th she was worse; vomited fluid almost black, with faint fæcal odour. In the afternoon the bowels acted twice, the motions being liquid, and passed involuntarily. No vomiting after 11 A.M. At 5 P.M. she became very restless; skin cold; pulseless. Died at 6 P.M.

Necropsy, twenty hours after death.—No union of wound; sac empty. Peritoneum intensely congested throughout, of a dark colour; no lymph or stickiness. Small intestine, six inches from ileo-cæcal valve, adherent to abdominal wall above and to the outer side of the femoral ring for half an inch, opposite the attachment of the mesentery. At this point the intestine was bent on itself at an acute angle. Above the adhesion the intestine was dilated; below, empty and contracted. The adhesion was easily broken down with the finger, leaving a slight roughness on the corresponding surfaces. The intestine in the neighbourhood for about three inches was of a darker colour than elsewhere, gradually fading off above and below. The mucous membrane throughout was congested, and in the neighbourhood of the adhesion was of a slate colour, but retained its natural consistence. There was no mark of any constriction either externally or internally; nor any evidence to show what portion of the omentum had been in the sac. Other organs not examined.

Remarks by Mr. SPANTON.—The above case is interesting as an example of an accident occurring after herniotomy which, as far as I have been able to ascertain, is not mentioned by any of the authorities on the subject. There is, however, a somewhat similar case reported by Mr. Rushton Parker in THE LANCET of Aug. 12th, 1876 (Case 3). There can be no doubt that the symptoms of acute obstruction were caused by the flexure of the intestine at the point of adhesion, combined with the torpor of the intestine which generally ensues, even without the administration of opium, on the liberation of a strangulated hernia. I say combined with this, for the normal contractions of the intestines would surely have been sufficient to have overcome what, at any rate at first, must have been a very slight impediment, even if they had not prevented the adhesion from taking place. It is strange that obstruction of this kind, without any actual constriction of the intestine, should so rapidly have proved fatal, when in most cases of herniotomy the bowels remain inverted a much longer time. The pain was at first thought to be connected in some way with the menstrual function, and throughout the case the flaccidity of the abdominal walls, their free movement during respiration, and the moist condition, contra-indicated general peritonitis; whilst the sound condition of the protruded intestine, when reduced, did not render the occurrence of any local inflammation very probable; so that until the vomiting occurred a favourable result was anticipated. As far as the absence of general peritonitis was concerned, the result justified our expectations; but from the intense congestion of the peritoneum, it is probable that if the patient had survived a little longer, some obvious indications of general peritonitis would have been found. Even if the exact condition of affairs could have been diagnosed, no treatment would have availed, for, although the adhesion could have easily been broken down by laying open the wound and passing a finger into the abdomen (and in this particular case this would probably have been successful), still, the adhesion having been seen or felt, it would naturally have been looked upon as an effort of nature to prevent extravasation, and no prudent surgeon would have dared, under such circumstances, to interfere with her proceedings.

SALISBURY INFIRMARY.

CASE OF EXTREME CONVERGENT STRABISMUS.

(Under the care of Mr. W. M. COATES.)

For the following notes we are indebted to Mr. J. Kelland, M.B., house-surgeon.

W. B——, aged sixteen, was admitted on the Sept. 29th, 1877, suffering from extreme convergent strabismus of the left eye. The patient was anxious that something should be done to remove the deformity, which she said had prevented her obtaining a situation as domestic servant. When two years old a waggon passed over her striking the right brow and temple. Since then she had squinted with the left eye. Her health had always been good. At the age of seven she underwent an operation, but no improvement resulted.

On admission the internal strabismus of the left eye was so extreme that only a very small portion of the cornea could be seen, and the girl could not by the greatest effort move the eye outwards, even to the twelfth of an inch. She had no vision in the eye. There seemed no doubt that the deformity was due to a rigid contraction of the internal rectus, and as the internal rectus had presumedly been properly divided in the previous operation without benefit, Mr. Coates resolved to proceed as follows:—

The internal rectus was divided very freely, but subcutaneously, after the manner proposed by Mr. Critchett. Then an incision with a blunt-pointed scissors was made through the conjunctiva about two lines from the outer margin of the cornea, and the external rectus was divided quite down to the sclerotic. Then, with the same scissors, a portion of conjunctiva and external rectus muscle was snipped away, to the length of the incision and to the width of three lines. Lastly, the edges were stitched together with the finest silk and a small curved needle held in a porte-aiguille, and the sutures, three in number, were cut off short.

The after-treatment consisted only in the constant application of iced water for twenty-four hours, and there was no inflammation and little pain.

Oct 1st.—Vision good, and eye in proper position.

On the 8th, the eye which was operated upon had slightly converged, and the right eye, which was previously straight, was markedly convergent. The internal rectus of this eye was then divided, after which the convergence of the left eye was only one line, as measured by the strabismometer. The girl was now made an out-patient.

On Jan. 18th, 1878, she was readmitted. The conjunctivæ

had quite recovered their healthy state, but the left eye had a convergent squint of two lines. Mr. Coates consequently repeated the previous operation on the left eye—i.e., he divided the internal rectus and took away sufficient of the conjunctivæ and external rectus to produce, when the stitches were drawn tight, a strong external squint. The little sutures were not withdrawn, and did not appear to produce any irritation. The success of the operation was complete.

Remarks by Mr. COATES.—The points of interest in this case seem to be—1st. The imputed cause of the squint. 2nd. Severity and obstinacy. 3rd. The success of an equally determined operative surgery, resulting in the restoration of sight to a previously useless eye, and the complete removal of a deformity which had seriously interfered with success in life.

CASE OF FOREIGN BODY IN POSTERIOR CHAMBER OF THE EYE.

L. L——, aged thirty-six, was admitted on September 8th, 1877, suffering from imperfect vision of the left eye, with much pain and congestion. He stated that two months previously, while at work in the fields, something struck his eye. On carefully examining the eye, a small body could be seen obstructing the pupil. The patient was at once put under the influence of methylene, and Mr. Coates proceeded to perform iridectomy, and extracted a small shell-shaped piece of iron, which was, no doubt, a splinter from the hoe with which the lad had been working. All irritation in the eye soon subsided, and the patient was discharged cured. Vision perfect.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Ulceration of Bowel associated with Granular Kidney.—Renal Calculi.—The Contagium of Measles.—Cancer of Female Lip.—Cancerous Ulcer of forty-three years' duration.

THE ordinary meeting of this Society was held on the 7th inst., Dr. Murchison, President, in the chair. There was but a small attendance, and but few specimens were shown, the most noticeable being preparations of skin &c. from measles, brought by Dr. Braidwood, of Liverpool.

Mr. BUTLIN read the report of the Morbid Growths Committee upon Mr. L. Browne's specimens of Cancer of the Tonsil. In the one the growth was a lympho-sarcoma, and invaded the palate and pharynx; in the other it was an epithelioma, which, starting probably in the tongue, had invaded the tonsil. The report was signed by Mr. Butlin and Dr. Goodhart.

Dr. DICKINSON showed a specimen of Ulceration of the Intestines in connexion with Granular Kidney. He said that two years ago, in his Croonian Lectures, he had related two cases of granular kidney in young subjects, both of whom died from peritonitis due to perforation (or nearly complete perforation) of the bowel from ulceration. This ulceration resembled that of dysentery, except that it occurred in the ileum, and not in the colon. Dr. Greenhow had since mentioned to him a third case of ileal ulceration and purulent peritonitis in a girl aged twenty, the subject of granular kidney. The present was the fourth case with which he was acquainted. The patient was a young man twenty years of age, who had marked symptoms of chronic Bright's disease, copious pale albuminous urine, very little dropsy, albuminuric retinitis, extreme hardness of the pulse, and hypertrophy of the heart. He had occasional hæmorrhage from the bowel and nose, as well as the retinal hæmorrhages. The supervention of peritonitis (from which he sank) made Dr. Dickinson think the case to be parallel to the other three. The kidneys were markedly granular and fibroid, and an interesting fact was that the renal lesion was the direct outcome of an attack of scarlet fever fourteen years before. At that time, when he was six years old, he had scarlatinal dropsy, and ever since his health had been bad. The ileum was ulcerated, and in two places perforated; the peritoneal sac containing purulent fluid. There was no tubercle, and no evidence of typhoid ulceration. As to the way in which the ulceration arose in these cases Dr. Dickinson was unable to speak with certainty; he believed it to be an actual result of the granular kidney with which it was associated, and it might be due to hæmorrhage into the wall of the gut. — The PRESIDENT remarked upon the youth of all the patients, and asked whether any explanation could be given of this. — Dr. DICKINSON said that in the present case the renal disease was clearly due to scarlet fever, and in another it was due to calculous affection.—The PRESIDENT asked, further, what proof was there of the absence of typhoid fever? Was the temperature raised? It was remarkable that in not one of the cases was the patient advanced in life. — Dr. DICKINSON said there was no history of typhoid fever in any of the cases, and two of them were under observation for a long time. There was no noticeable rise of temperature, and the chronicity of the disease put any acute fever out of the question.

Dr. ORD exhibited some Renal Calculi composed of mixed Carbonate and Phosphate of Lime. The first specimen was from the left kidney of the same case which afforded an indigo calculus some time ago. The kidney itself had been reduced to a mere pus-containing cyst, from gradual occlusion of the ureter by a sarcoma. The calculus was of the usual elongated and branched form, due to its formation from several centres corresponding to the various infundibula. The nucleus of the main portion consisted of uric acid and urate of ammonia in concentric layers, whilst the central parts of the branches of the calculus were composed of a soft white friable mass consisting chiefly of phosphate of lime with a little uric acid and soda, the microscope showing spherules of calcic phosphate mingled with needles and prisms of urate of lime. The outer and firmer portions consisted of urate of ammonia, phosphate and carbonate of lime, intimately blended with organic material. The calculus was thus probably built up as follows:—First, a deposit of urate of ammonia and uric acid in the pelvis, later in the infundibula and calyces, and this again becoming coated with carbonate and phosphate of lime; the separate portions becoming united together to form the branched calculus. It was quite free from indigo or indigogenous material. Dr. Ord also showed Fragments from Spontaneous Disintegration of Calculi in the Bladder, sent to him by Dr. Lockhart, of Blackheath, and Mr. Buckston Brown. The fragments were pyramidal in shape, the apex of the wedge being replaced by a slight concavity indicating the place where the nucleus had lodged. Some of the calculi were fawn-coloured and mainly composed of uric acid, others were covered by a white coating of urate of ammonia. The uric acid occurred mingled with the organic basis arranged in the form of radiating fibres interrupted by laminæ. In reply to the President, Dr. Ord said in none of the specimens he had shown was the nucleus preserved, but in a specimen in the College of Surgeons' museum, described as an instance of spontaneous fracture, the apex of the wedge was perfect, the nucleus being retained. The disruption of the calculi was probably due to swelling of the nucleus.

Dr. BRAIDWOOD, of Birkenhead, showed specimens and drawings illustrating the microscopical characters of the Tissues in Measles. He commenced by stating that the research was part of the investigation upon the life-history of contagium being carried out by himself and Mr. Vacher. He showed a specimen of some bacterial-looking bodies which had been collected from the breath of a child affected with measles, and, as will be seen, he had found similar bodies in the skin of measles subjects. Two cases only had been yet observed. In each the post-mortem examination was made within twenty-four hours of death, the tissues preserved in strong alcohol, and sent to Cole and Sons for preparation. In the first case death occurred on the eighth day after commencement of eruption; swelling of corium and rete mucosum from small-celled growth, especially around the hair-follicles and sweat-ducts, and in the true skin groups of spherical and rod-shaped sparkling bodies, not staining with carmine. They did not occur in the sweat-ducts or hair-follicles, and were not met with deeper than the sudoriparous glands. The lungs showed plugging of air-vesicles by exudation material, altered blood-globules, and also many of the sparkling spherical bodies similar to those met with in the skin. Like bodies were also met with in the liver around the bile-ducts. In the second case death occurred on the fourteenth day after the commencement of the eruption. There was less swelling of the skin, but still

similar particles occurred in the urine and in the lungs as in the other case. From the similarity of these bodies to the organisms in vaccine virus, Dr. Braidwood thought that they represented the "measles-micrococcus," and it was interesting that similar bodies should be found in the breath of measles subjects.—The PRESIDENT said the Society was indebted to Dr. Braidwood for having come so far to make his communication. The drawings shown most accurately represented the microscopical characters of the specimens; but the main question was whether the particles there figured were indeed really the "contagium particles" of measles. This had not been very certainly demonstrated, and he would suggest that these observations should be multiplied, that it might be found whether the breath of measles patients invariably contained these particles, which did not occur in the breath of other subjects. It would be well also to try to find a cultivating fluid in which the organisms could be developed.—Mr. M. BAKER asked whether the breath had been examined in any other of the exanthemata.—Dr. THIN believed that recent observations on breath showed that the air first expired contained bacteria, which were not found in the breath of later expirations. He commented on the different naked-eye characters of the exanthemata, the essential change in each case being one of increased vascularity. He did not think it possible to tell by simple microscopic observation whether any particles of the characters described by Dr. Braidwood were indeed living organisms or not.—Mr. BUTLIN was not surprised that bacteria were found in the breath, since the thin white fur on the tongue of healthy children abounds in bacteria. He also asked whether Dr. Braidwood had examined the expired air in other diseases.—Dr. LEARED, referring to Tyndall's observations upon the power possessed by certain odours of absorbing heat-rays, suggested that light might be thrown upon the specific fevers by submitting the odorous emanations from the body to a similar physical examination.—Dr. WILBERFORCE SMITH had found much fungus material mixed with epithelia in the fur on the tongue. He asked whether Dr. Braidwood had observed any changes in the bladder; he had often noticed a desquamation of vesical epithelium in measles.—Dr. ORD remarked that one of the cases was examined late in the disease, when the eruption should have passed away. Was there any difference noted in the characters of the bacteroid bodies in the two cases? What was their apparent size?—Dr. COUPLAND asked what were the methods of preparation of the tissues in question, since it had been shown that the reagents employed might so alter the albuminous material in the tissues as to deceive even so able an histologist as Dr. Klein. Conclusions should not be drawn until observations had been made under many varying conditions and circumstances.—Dr. BRAIDWOOD, in reply, said although the observations were so few, it had been thought desirable to bring them before the Society as early as possible. The research he and Mr. Vacher were occupied with was necessarily a lengthy one, and they had now examined large numbers of specimens showing the effects produced by various contagia on the tissues. He did not think much could be learnt by the "cultivation method," which often failed. He had only examined the expired air in one case of measles, but he was struck with the marked similarity between the bodies found in that specimen and those occurring in the tissues. He intended to continue the investigation of breath under different conditions. The bladder was not examined. The size of the bodies was rather larger than the vaccine-micrococcus (i. e., $\frac{1}{75000}$ of an inch). The manner in which the tissues had been prepared was the same during the whole of their investigation; the tissue was hardened in alcohol, and then sent to Cole and Son to be cut and mounted. In that way all the confusion arising from examining tissues prepared in various ways was obviated.—Dr. DICKINSON asked whether Dr. Braidwood had any facts for or against Dr. Salisbury's theory that the contagium of measles was connected with the growth of wheat.—Dr. BRAIDWOOD replied in the negative.

Dr. THIN showed several microscopical preparations of Epithelioma of the Female Lip from a case under the care of Mr. Bell, of Edinburgh. The patient was sixty-five years of age, and had been a smoker for upwards of twenty years. An ulcer formed at the right angle of the lip; it had a hard dry base, and showed the microscopical characters of epithelioma, a notable feature being distension and dilatation of the mucous glands. In the neighbouring skin the sebaceous glands had been affected, but not the rete mucosum.—Dr. Thin also showed a specimen of Cancerous Ulcer of the Skin of forty-three years' duration, which had been excised by Sir James Paget. The patient had been under the care of Mr. May. She was sixty-eight years of age, and three years ago noticed a pimple over the spine of the left scapula. In five years it had reached the size of a pea, was removed, recurred, and slowly increased in size. At the end of ten years it was again removed, and since then an ulcer was left, which gradually and very slowly spread over the whole scapula, until it was lately removed by Sir J. Paget. The case has since then progressed favourably. The margin of the ulcer was surrounded by a raised border, the limit of a new cell-growth, which advanced into the rete mucosum in the form of closely-packed cell columns; but in a downward direction was sparsely distributed between the connective bundles of the cutis. The cell-elements were quite different from those of the rete mucosum, but resembled most the lining of the sweat-glands, which were dilated and full of cells. The specimen was not rodent ulcer nor epithelioma proper, but probably most resembled the rare form of growth described by Verneuil as adenoma of the sweat-glands. A case recently brought before the Royal Medical and Chirurgical Society by Mr. Gaskoin, was also of this nature.

CLINICAL SOCIETY OF LONDON.

Tinea Circinata complicated by Pityriasis Versicolor.—A Case of Yellow Fever.—Treatment of Lupus Exedens.—Double Optic Neuritis and Obstruction of the Brachial Artery.

THE ordinary meeting of this Society was held on the 11th inst.; Mr. Callender, President, in the chair. Notes of an interesting case of yellow fever recently occurring in the west end of London were read by Mr. Leggatt, Dr. Greenfield furnishing the details of the post-mortem examination.

Mr. MALCOLM MORRIS showed a case of Tinea Circinata complicated by Pityriasis Versicolor. The patient, a young woman, first seen by him on April 29th, presented at the lower part of the neck, on the shoulders and both arms, and on the upper part of the chest and back, well-marked patches of ringworm. This extensive eruption dated from about eighteen months previously, and the interesting feature of the case was that on the body and back were also numerous patches of pityriasis versicolor, which had invaded the area occupied by the other parasitic eruption. The two forms of skin affection could readily be discriminated, the brown discoloration of the chloasma invading the erythematous rings of the ringworm, and a narrow margin of unaltered skin intervening between the two. Microscopical preparations showing the two forms of fungus obtained from the case were exhibited by Dr. Sangster. Mr. Morris stated that cases are recorded of favus complicated by ringworm; and others by Mr. Hutchinson in which ringworm seemed to have produced tinea versicolor. In reply to the President, he added that the eruption of pityriasis versicolor had existed only during the last three months, and was rapidly yielding to treatment. It seemed as if the ringworm fungus could exist in regions which had been deserted by the other parasite.

Mr. LEGGATT read notes of a case of Yellow Fever. The patient, a retired cavalry officer, fifty-two years of age, who had served in India till 1865, and retired from the service in 1867, had been attacked with hæmoptysis, and had for four or five years past spent the winter in some warm climate. Last winter he went to South America, landing on January 28th at Rio, where yellow fever prevailed, and thence going on to Buenos Ayres. There, on February 12th, the assistant purser of the vessel died of yellow fever, which he must have contracted at Rio, where he had only gone on shore for about an hour. The ship was put in quarantine at Buenos Ayres, and then returned to Rio, which was reached on February 21st, where the subject of the paper landed. The mortality from the fever was now very high at Rio, and they sailed thence on the 24th, touching at Bahia on the 27th, and Pernambuco on March 1st. At Bahia two other cases of yellow fever appeared on board among the crew. St. Vincent was reached on the 7th, and Southampton on the 17th. Mr.

X—— "felt queer" whilst in the Bay of Biscay, and was still unwell when he reached London on the 18th. On the 19th Mr. Leggatt saw him; found him suffering from malaise, which he attributed to the rough weather experienced in the Bay. The urine was acid, clear, free from albumen. On the evening of the 21st, after a hearty dinner, he felt chilly, and shivered. At noon next day he was suffering from frontal headache, pain in the back and limbs; pulse 100. Passed a restless night, was freely purged, and vomited some "coffee-ground" material; next day (23rd) was more depressed, and sallow. There was loss of appetite; tongue pale; pulse 108; temperature 101·3°. In the evening temperature was 100°, pulse 94. The motions were pale and whey-like. — 24th: Restless; skin tinged yellow; bowels frequently open; vomiting as before; pain and tenderness in abdomen. Pulse 48, weak and irregular. In evening pulse 60, less irregular; bowels still loose; no sickness since the morning. On this day Mr. Leggatt first heard of the cases of yellow fever on board the ship.—25th: Jaundice deeper, and weakness increased. Pain and tenderness in epigastrium. Urine very scanty, dark-yellow, and containing one-third albumen. In the evening the patient felt better. Bowels had been moved twice; stools still pale in colour. Vomited matters clear.—26th: Colour of skin deeper. Vomited matters clear, with dark grounds. Pulse 60. No motion or urine passed. The case was seen by Dr. Hawksley and Dr. Murchison in consultation with Mr. Leggatt in the evening. No urine had been passed for sixty hours. There was still vomiting; some fetor of breath, and swelling of lower lip. Five grains of calomel were prescribed, and digitalis fomentations to abdomen. At midnight he had an attack of convulsions, which continued and passed into a comatose condition, in which the patient died, the suppression of urine having lasted for seventy-nine hours. The course of the symptoms in the case, together with the facts of the post-mortem examination, which was made by Dr. Greenfield, proved the case to be one of yellow fever. That there had been no spread of the disease was no doubt due to the low temperature (38° F.) prevalent at the end of March. It is not known what degree of cold suffices to check the spread of the fever, but it is said in Peru that it is still infective at a height of 14,000 feet above the sea-level, and a temperature of 44°. The epidemic at Swansea in 1864, reported on by Dr. Buchanan, occurred in September, when the mean temperature was 65°. A case had been imported from an infected ship, and twenty-two cases occurred in the town, with fifteen deaths. The incubation period, generally said to vary from one to fifteen days, appeared in the present instance to have been prolonged to twenty-five days, confirmatory of Dr. Aitken's suggestion that, as the infected person recedes from the equator, the period of incubation may be lengthened. —Dr. GREENFIELD read an account of the post-mortem and microscopic examination of the case. The autopsy was made forty-three hours after death; weather very cold. Rigor mortis well marked, yet there were signs of decomposition in the abdomen; the blood was fluid and contained gas-bubbles, and there was deep staining of the tissues around the veins. There was general intense icterus of somewhat brownish colour; ecchymosis in the lower lip. The liver, slightly enlarged, deeply jaundiced, and of bright yellow colour, showed on section well-defined lobules, which were greenish in the centre; the surface of the organ was smooth, the capsule even, the gall-bladder and bile-ducts patent and healthy. The stomach contained much black fluid resembling altered blood, its coats and those of the intestines being healthy. The spleen, free from disease, was small and firm. The kidneys generally stained and somewhat decomposed, presented slight swelling of the cortex. The lungs contained numerous scattered hæmorrhages in the lower lobes, and subpleural ecchymoses. The pericardium was free from ecchymosis; the heart-wall soft and greasy. Microscopic examination of the liver showed an interstitial exudation, part of which appeared to be old, part recent, and of acute origin. The liver-cells were swollen, containing much pigment at the centre and periphery of the lobules, and some fat also at the periphery. Together with this were tracts of liver-tissue in which the cells were swollen and split up into fragments, some containing nuclei, others bile-pigment or oil, and others apparently deliquescing, and between the cells were many nuclei. The kidneys showed changes exactly similar to those seen in the earlier stages of acute parenchymatous nephritis, and some older fibroid changes. The spleen was quite healthy. Dr. Greenfield remarked that the morbid appearances resembled in most respects those which had been described by many observers in the tropics, but that the changes in the liver, which were analogous in kind to, though less in degree than, those seen in acute yellow atrophy, established the existence of a true parenchymatous hepatitis in yellow fever—a condition which had been denied by some authorities. The alteration in the liver was, in fact, similar to that in the kidneys.—Dr. CAYLEY pointed out that in one important respect—viz., in the normal and subnormal range of temperature during the greater part of the case—the case differed from the usual descriptions of yellow fever. Both the symptoms and the post-mortem appearances suggested acute yellow atrophy of the liver.—Surgeon-Major HUTTON, alluding to the question of the nature and etiology of yellow fever, gave some interesting facts showing that it is a disease of cities, and not a malarial fever. He believed with Parkes that it was really a fæcal fever, and hence, if a case be imported into this country, especially in a town, the risk of its spreading was great.—Dr. GREENFIELD said that the question of the case being acute yellow atrophy of the liver was present in the minds of all who had to do with the case. He would ask Dr. Cayley whether in that disease the spleen is not usually enlarged, and whether it is usual to find changes in the kidney and heart associated with it.—Dr. CAYLEY did not mean to imply that the case must have been one of acute yellow atrophy, but only that the symptoms, especially the temperature, did not accord with what we are taught is the case in yellow fever. Undoubtedly the spleen is enlarged in acute yellow atrophy, which, however, commonly supervenes in a liver previously diseased, as in the present case.—Dr. GREENFIELD, in reply to a question, said that the brain was not examined.—Dr. GLOVER inquired as to the previous habits of the patient.—Mr. LEGGATT, in reply, said that on the second day he saw the patient the temperature was 101·3° F. in the morning, and 100° in the evening, after which it fell to normal. It was not uncommon in yellow fever for the temperature to go down and remain depressed. Before the autopsy Dr. Murchison thought the symptoms might be explained by liver disease only, but after the examination he was satisfied as to the case being one of yellow fever. The patient used to live well, and drank his bottle of champagne a day; for the last six or eight years he had been a valetudinarian.

Mr. SPENCER WATSON read notes of Two Cases of Lupus Exedens, to illustrate Hebra's plan of local treatment by caustic.—Case 1: A policeman, aged twenty-eight, in whom the ulceration on the face followed a kick in that region. Solid nitrate of silver was freely rubbed in on several occasions, and at the same time iodide of potassium given internally. Cicatrisation occurred in a few weeks.—Case 2: A pale, ill-nourished man, thirty-four years of age, first seen in November last. He then had an ulcer the size of a horse-bean on the right side of the cheek and ala of the nose. There was no history of syphilis, but he had lived badly of late. He was at first put upon cod-liver oil, and vaseline was used locally, but the ulceration continued to spread and to increase in depth. On January 25th treatment by solid nitrate of silver was commenced, and repeated on the 28th and 31st, iodide of iron and three grains of compound soap pill being given internally. Several of the ulcers had healed by Feb. 4th, and on the tenth of the month cicatrisation was complete. The patient was now shown to the Society, a cicatrix on the right cheek indicating the seat of the previous ulceration. The ala of the nose was preserved, with only slight narrowing of the nasal aperture. The cases illustrated the rapid improvement following upon the free use of caustics, antiseptic dressings, improved diet, and opiates.

Dr. BUZZARD read notes of a case of Double Optic Neuritis, with Obstruction of the Right Brachial Artery. The patient, a young woman, aged eighteen, was brought to the National Hospital for Epilepsy and Paralysis on Dec. 19th, 1877, with a history of an attack of paralysis in the right arm having occurred after a fit four days previously. The attack was preceded by headache, which lasted for two days. Her manner was strange and confused, so that at first it seemed as if the symptoms might be due to hysteria. But the ophthalmoscope revealed double optic neuritis, and soon after her admission it was noticed that there was no pulse to be felt in the right radial or ulnar arteries, and pulsation in the brachial ceased about half-way down the arm. There was also cutaneous anæsthesia of the forearm and hand, except over the lower end of the radius and the first and second fingers. The mental confusion began to

subside after two days. There was headache, and on one occasion diplopia, but no vomiting. She was ordered iodide of potassium, and a gradual improvement took place. She regained power in the arm, and the pulse began to return in the radial artery. Dr. Buzzard showed sphygmographic tracings taken at various intervals, showing the gradual improvement in the pulse-trace. After taking the iodide for some weeks, the hypodermic injection of the peptone of mercury, as used by Bamberger, was administered. At the end of February the patient was discharged from the hospital for misconduct. She had a hysterical fit, falling down on the floor and declaring she had lost power in the arm again. Since then she has not been heard of. Dr. Buzzard remarked that the existence of double optic neuritis was sufficient to show that the case was not simply one of hysteria, but that there was evidently some coarse intracranial disease, a view borne out by the headache and the imperfect hemiplegia. The cause of the transitory cutaneous anæsthesia was obscure; the arm was not injured by the fall in the fit which occurred at the commencement of her illness, and the distribution of the anæsthesia did not coincide with the anatomical distribution of nerves. A history of syphilis in the case suggested to Dr. Buzzard that the cause of the obliteration of the brachial artery might be found in an endarteritic affection similar to that first described by Heubner in the cerebral arteries in syphilis, and largely illustrated at the Pathological Society last year. He was not aware that such changes often occurred in other vessels than the cerebral, but Dr. Greenfield had found them in the spleen and kidneys, and also at the commencement of the aorta.—In reply to the President, Dr. Buzzard said the heart was healthy.—Mr. BRUDENELL CARTER thought that the data for generalising about optic neuritis were still wanting. He recently saw at St. George's Hospital, under Dr. Dickinson's care, the case of a young woman (also a prostitute) who was totally blind in the left eye from extreme neuro-retinitis. After three weeks' treatment by mercury and iodide of potassium, the fundus cleared up, and vision was completely restored. The right eye had never been affected at all. Two days ago he was consulted by a young officer, thirty years of age, in good health, and who four days before had suddenly lost the sight of the right eye. The retina was milky in the region of the macula, and that morning, on examination, he had found swelling of the disc, the vessels being buried in exudation. It might be due to some interference with the retinal circulation, but there was no evidence of embolism. He hoped that Dr. Buzzard would some day relate the sequel of the case.—Mr. G. BROWN did not think the arrest of the blood-flow in the brachial artery could have been suddenly induced, no acute symptoms having been produced by it, and he suggested that there was an abnormal distribution of the arteries in the limb.—Dr. BUZZARD, in reply, pointed out that the pulse returned to the radial and ulnar arteries after having been completely absent for a month. There was no evidence of any acute symptoms following the blocking of the vessel. As to embolism, which might be thought to account for all the symptoms, he had never seen double optic neuritis occurring as a result of cerebral embolism, and the rapidity with which the hemiplegia cleared up was opposed to that view. In reply to the President, he stated that he did not detect any thickening in the radial or ulnar arteries.

MEDICAL SOCIETY OF LONDON.

Congenital Deformity of Rectum.—The Surgical Treatment of Intestinal Obstruction.

AT the meeting on April 29th, Mr. Erasmus Wilson, President, in the chair, Mr. FRANCIS MASON exhibited a lad, aged nine years, with a Congenital Malformation of the Rectum and External Organs of Generation. The case had been sent to Mr. Mason by Mr. E. J. Day, of Dorchester. The scrotum was divided in the median line, the sides resembling the two labia majora in women, each of which contained a healthy testicle. A glans penis, placed in the position of a clitoris, was, like the testicles, of the usual size in a boy of the patient's age. There was no urethra on under surface of the glans, but a shallow groove, indicating slight hypospadias. About the situation of the meatus urethræ of the female was a circular orifice, the size of a quill pen, which led into a common cloaca, and through which the urine and fæces passed. The patient could retain his urine, but the fæces escaped involuntarily. On introducing a female catheter it passed backwards to the situation of the anus, and the thin skin in this region could be readily protruded by the instrument, and by pressing the part in a forward direction a feculent discharge was induced. The catheter could not be passed into the bladder, or, if it did enter the viscus, no urine flowed, from blocking of the instrument with fæces. The pelvic bones were apparently normal, and the boy enjoyed excellent health. Mr. Mason thought that nothing could be done for the patient, and added that an unsuccessful attempt had been made to establish an anus when the lad was a baby a few months old.—The PRESIDENT asked if there was a perfectly free passage for the fæces.—Mr. ROYES BELL referred to a case under the care of the late Sir Wm. Fergusson, in which the latter had passed a catheter down the urethra towards the rectum, and then cut down on the point of it.—Mr. OWEN suggested that a fæcal abscess had opened through the urethra. He advised enlarging the opening by means of sponge tents. As to other operative procedures, it would be advisable to wait for symptoms.—The PRESIDENT regarded the case as one of hermaphroditism, and referred to a case in which he was consulted several years ago, where the vagina and rectum formed a common outlet. The subject of the deformity subsequently married and became pregnant.—Mr. BRYANT said the case was interesting and rare from the intestinal as well as the urino-genital tract being involved. He did not think it a case of hermaphroditism. Some operative measures should be taken, and he suggested that an instrument might be passed through the opening backwards towards the rectum, and then cut down upon.—Dr. WILTSHIRE advocated dilatation first with laminaria tents and then sponge tents. When the opening was sufficiently large he would explore the cavity with the finger.—Mr. MASON, in reply, said that the boy, when constipated, had to expel the fæces by pressure. He had tried to pass a catheter through the opening, but had failed to discover whether it entered the bladder or not, owing to the blocking of the catheter by fæces. If he were to adopt any operative procedure, he would feel disposed to follow the suggestion thrown out by Mr. Owen.

A paper was then read by Mr. BRYANT "On the Surgical Treatment of Intestinal Obstruction" (see pp. 674, 711).—Mr. NAPIER asked what treatment, as regards food, Mr. Bryant would adopt, in cases of obstruction of four or five days' duration, and whether starvation would not be a curative measure.—Dr. SANSOM related two cases under his care at the London Hospital:—1. A man, aged twenty-six, brought in after fourteen days' constipation. There was excessive vomiting and collapse, and the vomiting became fæcal. Dr. Sansom introduced his hand up the rectum, but failed to discover any obstruction. After two or three days the symptoms began to subside. A relapse taking place, the O'Beirne tube was used, and eventually the man made a good recovery. 2. In this case there was a history of sudden onset. The symptoms were less urgent than in the first case, and the vomiting was not fæcal; the man, however, became collapsed, and died. Post-mortem examination showed that the bowel was twisted upon itself five times. He asked whether insufflation could have succeeded, and in another case he should try it both by mouth and rectum. He suggested the use of a large dose of bicarbonate of potash, followed by a solution of tartaric acid.—Mr. MAUNDER differed from the author as to the performance of enterotomy in "contractions" of the intestines. As in such cases several strictures existed, an opening between any two would be useless. He claimed to have suggested the operation of enterotomy, and to have performed it and brought it before the notice of the profession in this country some years ago, independently of Trousseau's reference to it, and he was surprised that Mr. Bryant had overlooked his claims. Mr. Maunder also maintained that he was the first to originate the practice of introducing the whole hand into the rectum, since largely advocated by the late Professor Simon of Heidelberg.—Mr. ROYES BELL said that Sir B. Brodie had called attention to the subject of the introduction of the hand up the rectum.—Mr. BRYANT thought that Nélaton ought to have the credit of the operation for the relief of intestinal obstruction. In answer to Mr. Napier, he would feed the patient as in cases of hernia. If the obstruction was acute, no food; if chronic, as little as possible.

PROVINCIAL MEDICAL SOCIETIES.

BRADFORD MEDICO-CHIRURGICAL SOCIETY. — APRIL MEETING.—The President, R. H. Meade, Esq., F.R.C.S., in the chair.—Dr. BELL exhibited a specimen of Aneurism of the Left Ventricle of the Heart. It was taken from a patient admitted into the Bradford Infirmary in a state of syncope, from whom no history could be obtained. The patient died on the day of admission. The pericardium was entirely adherent to the heart, the adhesions being old. The heart was hypertrophied; the aneurism, about the size of a hen's egg, existing in the wall of the left ventricle at its upper and anterior part. Its walls were lined with laminated clot. It had no connexion with the coronary vessels, and opened directly into the cavity of the ventricle. Dr. Bell had not been able to find in medical works records of a similar case.—Mr. MOSSOP read a paper on Puerperal Goitre, in which the disease was described as occurring simultaneously with and under the stimulation of pregnancy. He dwelt upon the comparative frequency of its occurrence in the neighbourhood of Bradford, and narrated seven out of fourteen cases which had come under his observation, and of which he had taken notes. After referring to the literature of the subject, and quoting from the experience of Dr. Ollivier and Mr. Lawson Tait, his remarks were descriptive of a recurrent variety of this disease, in which the thyroid gland, slowly enlarged, caused no pain nor disturbance of breathing, no exophthalmos, and which seemingly appeared under the stimulation of pregnancy, and developed until delivery, when it began to diminish, and in course of time entirely, or almost entirely, disappeared, to reappear in subsequent pregnancies. He also alluded to a decided increase in the size of the gland in menstruation. The enlargement was stated to be due to some endemic cause, lime occurring largely as a geological formation in the districts round about. A slight increase in the size of the gland had been often noticed in young unmarried women; in one instance three members of a family (females) were affected with large goitre, and one decided case of exophthalmic goitre in a man had been met with.—Dr. Goyder said these cases differed from those of suffocative puerperal goitre, successfully treated by Lennox Browne by exciting suppuration in them by means of the seton. He related a case which became dangerously suffocative, but which was at once relieved by spontaneous miscarriage.—The President had performed tracheotomy in one fatal case of puerperal suffocative goitre. The induction of premature labour in these cases was suggested by the relief spontaneous miscarriage afforded the patient.—Dr. Burnie thought bronchocele commoner in Staffordshire than Yorkshire, and less common in the West Riding than formerly. He had seen a fatal case from suffocation, and wondered at its infrequency. There was a connexion between goitre and the uterine function, shown in the increase of the gland at puberty. In the incipient stage iodine and hygienic means rapidly cured the affection, but if neglected it became increased and confirmed.—Dr. Bell remarked on the increase of pulse and temperature in exophthalmic goitre, and on the advisability of recording these and the facts of heredity in all cases. The best treatment was to terminate the pregnancy.—Mr. Mossop replied, and alluded to Lawson Tait's remark that the subjects of this disease frequently aborted.—Dr. RABAGLIATI read a Note on a New Method of Putting up the Hip-joint in Disease. In order to obviate the constant trouble caused by the rolling of the long splint over the limb and abdomen, especially in children, Dr. Rabagliati recommended the following plan, which had answered well in one case in which he had used it. A flannel roller was applied to the leg, thigh, and pelvis of a child, aged two years and four months, suffering from incipient morbus coxarius. The groin was covered by a figure-of-8 bandage in the flannel roller, so applied as to leave the anal and vaginal orifices free. Over this, beginning above the knee, was applied a wet plaster-of-Paris bandage, which was carried over the figure-of-8 bandage at the groin and round the pelvis. Extension was made by the use of a weight of shot fixed to the leg. The plaster-of-Paris having set, the limb was encased in a firm covering, which prevented movement of the joint as effectually as the long splint, but which did not require the readjustment of the other. The plaster splint was applied on Feb. 13th, and when taken off on March 16th there was not a scar nor excoriation anywhere on the child's skin. The second application was made on the latter date, the splint being on now. — The President thought the plan good for children, and worthy of further trial. The treatment by the long splint and weight was cumbersome and difficult to manage.—Some further remarks by Drs. Bell and Rabagliati terminated the proceedings.

BRISTOL MEDICO-CHIRURGICAL SOCIETY. — The last meeting was held on March 27th, when the ex-President, Mr. Augustin Prichard, resigned the chair to Dr. HENRY FRIPP, who gave an address, in which he suggested the publication of an occasional volume of original papers, and also recommended the more frequent introduction of subjects in general medicine and therapeutics. He then proceeded to discuss the subject of Contagium Vivum, giving an historical *résumé* of the older and more recent doctrines, endeavouring to show—1. How the general idea of contagium vivum and parasitic origin and transmission of disease grew up together, dominating a large field of pathology until a recent period. 2. How it came to be generally understood that deranged action of the system and the products of morbid processes must be distinguished from the special phenomena of parasitic disease. 3. How, by a clear definition of parasitism, for which medicine was indebted to natural science, it came to be seen that the parasite stands in a double relation to the organism it invades, (*a*) as exciting morbid processes in the tissues, whose normal life is violated by its presence, and (*b*) as itself constituting a predominant part of the disease which it excites. 4. How the germ theory was to be defined, not as a theory of disease germs of innate origin, but as disease produced by germs alien to the body they invade, and whose life history and actual nature must necessarily be previously studied. 5. How these two aspects of germ doctrine stood with respect to *contagium vivum* and the old *parasitism*, as well as to the at present more restricted scientific definition of parasitism. Lastly, he gave a summary of recent botanical researches into the nature and life history of fungoid germs, and more especially those of known skin diseases. Throughout the paper, Dr. Fripp endeavoured to show the close correspondence between the postulates of present germ-theories and the ideas, explanations, and anticipations of the older pathologists. The following officers were elected:—President: Henry Fripp, M.D., M.R.C.P. President elect: W. Michell Clarke, Esq. Secretary: R. Shingleton Smith, M.D.

MANCHESTER MEDICAL SOCIETY.—At the meeting of this Society on April 3rd Mr. F. A. Heath, President, in the chair, Mr. CULLINGWORTH mentioned the case of a child, born about the seventh month of pregnancy, which, although free from any appearance of disease, was extremely thin, measured only fourteen inches in length, and weighed two pounds. It died from convulsions at the age of six weeks.—Dr. EMERYS-JONES showed a gliomatous tumour of the cerebellum from a boy aged seven, who died after a convulsive seizure. There was atrophy of the right optic nerve, and neuritis of the left. He also showed a child with a nævus occupying the right upper eyelid.—Dr. HUMPHREYS exhibited specimens of scarlatinal endocarditis. He had found endocarditis four times out of seventeen inspections of cases of scarlet fever made during the last fifteen months.—Mr. STOCKS described an ingenious method he had devised and practised for amputation of the penis, and also showed a man from whom he had removed an osteoid cancer of rapid growth.—Dr. ROSS exhibited the brain from a boy aged four years, whose case was read before the Society two months ago. The diagnosis then made was descending sclerosis of the right lateral column of the cord, and two tubercular tumours of the brain, one in the medullary substance beneath the left sulcus of Rolando, and the other in the left lobe of the cerebellum. This was confirmed at the autopsy, only there were several tubercular tumours, each of the size of a hazel-nut, in the left sulcus of Rolando, another of the size of a pigeon's egg in the left lenticular nucleus, which had pressed inwards on the internal capsule, so as to have interrupted the fibres of the motor tract. The right and middle lobes of the cerebellum and a portion of the left were occupied by a tubercular mass.—Mr. BRADLEY showed a girl half of whose lower jaw he had excised subperiosteally six weeks before, on account of a myeloid tumour. Almost complete bony restoration of the jaw had taken place. He showed also a man whose thigh he had amputated fifteen months before for alveolar sarcoma. The tumours were numerous, and had repeatedly returned. Since the amputation there had been no recurrence.

THE LANCET.

LONDON: SATURDAY, MAY 18, 1878.

IT becomes a matter of great interest to know what the Duke of RICHMOND will do in reference to the Bill which he has introduced for amending the Medical Acts with the astounding omission of clauses for providing a one-portal admission to the profession, and with the very unsatisfactory omission of clauses for amending the constitution of the Medical Council. His explanation of the omission of the one-portal system is twofold. In his first statement he attributed it to "a Scotch difficulty"; in his second he seemed to lay the blame of the omission on the Medical Council on the ground that a compulsory conjunction of bodies was not one of the points in a programme of things requiring medical legislation submitted to his Grace's attention by the Medical Council. The "Scotch difficulty" undoubtedly was the more operative with the Duke, for he said enough on the first occasion to indicate that his own personal feeling was one of regret that, in consequence of this difficulty, he was unable to compel the bodies. It was, no doubt, an oversight in the Council not to have reasserted the necessity for a consolidation of the examining bodies as the most urgent point in any scheme of medical reform. But it would be idle to suppose that the Government did not know the opinion of the Council and of the profession, and, we may add, of the public, on this question. The Council had repeatedly asserted itself upon the subject, and always in one way. The Duke is now on the horns of a dilemma. The Scotch are still unaccommodating enough not to remove "the difficulty" by withdrawing their opposition to the conjoint principle. But now the Duke of RICHMOND has a "difficulty" still more serious in the shape of a representation from the General Medical Council avowing its adhesion to the conjoint principle and its compulsory enforcement in any amending Bill. He has heard the case for this principle stated with great clearness in the House of Lords by the Marquis of RIPON, and he is not likely to be left in doubt that the great bulk of the profession desire devoutly the abolition of single qualifications and the establishment of conjoint boards. Petitions and deputations will make this clear either in the House of Lords or in the more accessible regions of the lower House.

There is another "difficulty" which the Duke of RICHMOND will have to face, and that is the opposition of those who object to any large measure of medical reform that does not deal with the composition of the Medical Council. We will allow that this opposition does not include a majority of that body, but it includes nearly the whole profession, and it was sufficient to spoil what would otherwise have been the very good success of Lord RIPON'S Bill. This opposition has been immensely strengthened by the recent action of the Medical Council in declining the higher duties which the Duke of RICHMOND very properly proposes to assign to it, of framing examination rules and regulating standards of examination and courses of study. The Medical Council has hereby given a supreme demonstration of its unfitness for work which should be, *par excellence*, THE work of a Medical Council.

We have said nothing of other opposition, as that from our lady friends, which the Duke may expect in proceeding with his measure. We hasten to the question, What will he do under all the "difficulties" of the situation? We cannot at present answer this question; but we can answer another—viz., this: What ought to be done with the measure now before Parliament? It should be abandoned. It is impossible to proceed with a measure that is opposed by all the Crown members of the Council except one, and by all the corporations and universities of England. Not only so. The "difficulties" are so numerous and complicated, and the differences of opinion are so serious, that nothing less than a Royal Commission will suffice to collect all the evidence essential for showing the evils of the present system and the proper ways of remedying them. The Duke himself must see that it is not enough to refer on this subject to such a body as the Medical Council. It is too representative of interests and of sensitive traditional feelings to be a guide in all the difficult ways of medical reform. The public is deeply interested in the utmost efficiency and simplification of the process by which its medical practitioners are qualified. Moreover, the profession at large feels most strongly, and is in a position to offer serious obstruction to any imperfect Bill. Under all these circumstances—for which, it is only fair to say, the Duke is not altogether responsible—the right and dignified course will be to refer the subject of examinations in medicine for inquiry by a Royal Commission. Any Bill brought in after due inquiry by such a body would be likely to be accepted with practical unanimity.

GREAT questions have often been fought out upon narrow ground. Pathology, as well as history, affords illustrations of the fact. The cornea of the frog is a small object, but upon it many of the problems relating to the most important of all pathological processes—inflammation—have been worked out, especially those which relate to the participation of the fixed elements of a tissue in the changes which occur. It must be confessed, however, that the results hitherto obtained have been by no means conclusive. A further contribution to the subject, by Dr. SENFTLEBEN, has just appeared in VIRCHOW'S *Archiv*, important, not only for the care which the investigation displays, but also for the clearness with which it corroborates the views of COHNHEIM. The coarser area of the field of observation is, it is true, a little enlarged, for the cornea of the rabbit is chosen instead of that of the frog, as affording special advantages—especially in that the greater size offers a better means of differentiation of morbid from healthy parts and of separating the conditions of the process, as well as greater facilities in the process of subsequent examination.

Authorities of weight have adduced observations on each side of the controversy regarding the participation of the fixed corpuscles of the cornea in the formation of pus. On the one hand, COHNHEIM'S well-known denial of their implication has been corroborated by EBERTH and others, while BÖTTCHER and WALB have affirmed the fact of their participation in the process. This latest contribution of

SENFTLEBEN, as we have said, corroborates very strongly the conclusions of the former observers, and also demonstrates the source of some of the opinions which do not harmonise with those attained.

In all observation on this subject the exact method employed is of great importance. SENFTLEBEN employed, following the example of BÖTTCHER, chloride of zinc, instead of nitrate of silver, as a cauterising agent, and hardened the cornea in chloride of gold. The most important element in the researches is the discrimination of the processes of inflammation and reparation of the damaged tissue. Both these go on in curious spike-like processes, but it is asserted that the distinctions between them are most conclusive. The nuclei in the regenerating process are a long oval in form, much less deeply-tinted than those of the wandering round cells, and constantly show three or four nucleoli. On the other hand, the nuclei of the wandering round cells are smaller, and tint much more deeply. Most of these cells contain two, three, or four nuclei, lying close together, and often distending the cell. The arrangement of the cells in the two processes is equally distinctive. In the process of regeneration the nuclei are far apart, while they are much closer in the inflammatory process, and the closer the more intense it is, so that they may come to be actually in contact. The course and arrangement of the spikes of cells are also in the two cases different. Finally, another characteristic of the regenerative process is that at the extremity of the spikes the protoplasm often exhibits fibrillation, while no such appearance is ever seen in the inflammatory process. The regenerating changes go on concentrically and uniformly in the entire periphery of the cauterised area, and by this the corneal corpuscles which have been destroyed are restored, so that the cauterised area after a certain time presents a completely normal appearance.

SENFTLEBEN concludes that the whole of this reparatory process may go on without there being visible at any time, either in the cauterised region or in the periphery of the cornea, any wandering corpuscles, and also without the appearance of any large masses of protoplasm having the slightest resemblance to giant cells. The fixed corneal corpuscles proliferate, but only produce other fixed corneal corpuscles, never round, pus-like cells. Whatever caustic was employed, provided its action was sufficiently deep to pass beneath the epithelial layer, so as to preclude the passage of cells into the cornea from the conjunctival space, the result was always the same. No pus-cells arose from the fixed corpuscles. When measures were taken to secure the death of these corneal corpuscles, round cells might still appear, but they evidently came from the periphery, since they were found in decreasing number on passing from the periphery to the centre, and were never so collected in the centre as to suggest the idea of local origin. If the cornea was tinted before the fixed corpuscles were obscured by the numbers of round cells which wander in, the former might be seen to be quite unchanged.

The path by which the wandering cells enter is threefold: first, by the nutritive channels of the cornea; secondly, between the fibrillæ of the corneal substance; and, thirdly, along the nerves. The more considerable the inflammation the greater the number of these cells, and in intense inflammation they may be so abundant that they surround and compress the fixed corpuscles, and this has given rise to the idea that the latter participate in the changes. These corpuscles are in the way of the wandering cells, for they lie in the interfibrillar spaces by which many of the cells pass. Precisely the same appearance, the corpuscles being surrounded by the round cells, is seen in corneæ in which the cells are, and in those in which they are not, killed by the action of the caustic.

By these and other means of observation SENFTLEBEN concludes that the activity of the fixed corpuscles and that of the wandering cells may be completely separated. The two participate in processes which are essentially different, and which lead to completely different results. The effect of the activity of the fixed corneal corpuscles is exclusively to give rise to similar elements which have been destroyed by cauterisation, and so to restore the injured portion of the cornea. The presence of a large number of wandering, leucocyte-like, round cells is, on the contrary, the characteristic of corneal inflammation. In their origin the fixed corpuscles take no part. If the inflammation is very intense—i.e., if a great introduction of round cells occurs,—portions of the cornea may be entirely destroyed by them; but if it is moderate, the cells which have entered may disappear, and the remaining corneal tissue may be repaired by the fixed corpuscles. Thus the latter play a reparatory, the round cells a destructive, part.

It may, however, be asked, On what ground is this sharp demarcation between reparation and inflammation founded? Would not some be inclined to regard as inflammatory the process which SENFTLEBEN calls reparatory? The distinction, it will be observed, turns on the presence of the round cells in the region. In a non-vascular tissue these have been almost universally taken as the characteristic of inflammation. During the whole process which is regarded as reparatory, the round cells, as a rule, are not seen. Moreover, the two processes are accompanied by characteristic macroscopic appearances. The inflammatory process, with its abundant cell-infiltration, is indicated by opacity of the cornea; the process of reparation, with participation of the fixed corneal corpuscles, by increased and increasing transparency. Hence it is assumed that the two processes, which are designated inflammation and regeneration, are completely independent of one another, and have nothing in common.

If the fixed corpuscles of the cornea do not furnish the round cells, what is the source of their elements? Two only are conceivable—the episcleral vessels and the conjunctival sac. The passage of cells from the conjunctival sac into the cornea has been rejected as untenable by almost all observers, but some observations of SENFTLEBEN go far to demonstrate that such a passage does occur under certain circumstances, and that both of these sources may, in different cases, furnish the wandering cells. If two spots are cauterised, one in the centre of the cornea, and one at its periphery, adjacent to the vessels, the latter will be crammed with round cells when the latter is free from them. It seems reasonable to conclude that the source of these in the peripheral spot is the adjacent vessels. But if a fine thread is passed into the region which has been cauterised in the centre of the cornea, a dense swarm of round cells passes in along the thread, and they accumulate in the

affected area. In this there are no living fixed corneal corpuscles, and in it, without this intentional opening of the corneal tissue, not a single round cell would be visible in the affected area. The conclusion that the cells entered from the conjunctival sac seems inevitable.

Thus the central cauterisation of the cornea, without opening of the corneal tissue, never leads to the changes recognised as inflammatory, never to the appearance of round cells, but only to the regeneration of the fixed corneal corpuscles destroyed by the caustic. If, on the other hand, the tissue is opened up, there is a passage inwards of the corpuscles from the corneal sac, and the appearance universally recognised as that of inflammation in a non-vascular tissue. Without this opening of the tissue there is no true keratitis.

LIEBERKUEHN has asserted that carmine injected into the living cornea tints only the fixed corpuscles, and by this method WALB was led to the conclusion that the origin of round cells from the fixed corpuscles could be traced. But SENFTLEBEN asserts that the result of his injections is precisely the reverse; that after the tenth day of the injection it is not the fixed corpuscles which appear carmine-coloured, but that all the granular particles of carmine which are in cells are in the wandering round cells; and he gives conclusive reasons for believing that all those which are thus coloured have passed in by the opening made for the injection. In a few weeks, colossal, many-nucleated masses of granules are developed, and SENFTLEBEN concludes that these also come only from the wandering cells.

Thus this important investigation furnishes new proof that the accuracy of COHNHEIM'S observations and the correctness of his conclusions are alike unassailable, and that the objections which BÖTTCHER and others have made are untenable. It cannot be doubted that the clearer results which SENFTLEBEN has obtained are due in part to the better facilities for observation furnished by the rabbit over the frog.

THE season is rapidly approaching when the ventilation of rooms of assembly, annually, assumes practical importance, and becomes a matter of the highest concern to all classes. It may be a not untimely moment to point out a few of the fallacies which too commonly prevail in connexion with this subject, and the differences—amounting to discords—which exist between theory and practice. Certain general laws known to govern the behaviour of atmospheric air and the common gases, under varying conditions of temperature, interchange, and rest or motion, are supposed to determine the supply and diffusion of pure air in, and the removal of noxious vapours from, crowded apartments, and so to constitute "the principles of ventilation." This is the first misconception, and when too trustfully adopted, it marks the opening of a comedy of errors. For example, "Heated air rises to a higher level than cold, therefore if a cool and pure supply is secured through or near the floor of a room, and an exit provided for foul air at the top, the system of ventilation must be satisfactory." Again, "By the diffusion of gases, an approximately perfect, if not complete, distribution of fresh air admitted from without will be effected, so that, provided only the supply of oxygenated atmosphere to an apartment is sufficient, it may be fairly assumed that its occupants have all their fair share of the necessary." In theory both these propositions are unimpeachable; the test of experience, however, shows that in practice they are either misinterpreted or wrongly applied.

The important factor left out of the account in constructing what are called "systems" of ventilation is the disturbing power of the pulmonary apparatus which each individual present brings to bear on the arrangement pre-conceived. Each pair of lungs is a pump—apart from its influence as an organ alternately withdrawing oxygen from, and discharging carbon into, the atmosphere. The chemical depurating effect is recognised and provided for; but the physical action is disregarded. It is forgotten that, except in the case of a congregation shouting or singing with upturned faces—a wonderful aid to ventilation in densely crowded assemblies—the human pumping apparatus acts *horizontally* on a stratum of the contained atmosphere some four and a half or five feet above the floor level, and by the disturbance it causes affects with no inconsiderable force the "system" which has been adopted. This is no imaginary hypothesis, as any sceptic may convince himself by studying the cloud of dense vapour hovering over a crowd, even in the open air, or the tobacco-smoke which oscillates transversely about and above the heads of a party of smokers. In fact, the behaviour of smoke from a pipe or cigar affords, as was pointed out some ten years ago, the best, and almost the only indication of the extent to which any apartment is actually ventilated. The *crux* of the difficulty lies in the circumstance that if a room is provided with apparatus suitable in point of force and supply for the presence of five hundred pairs of lungs, it is almost sure to be hyper-ventilated, and therefore too cold for only one hundred. Superadded therefore to the problem of ensuring the distribution of air which *ought to* find its own way where it is needed, there is that of regulating the supply, so that it shall not be in excess of the demand.

Practically, nearly all our places of public concourse are either not ventilated in any special manner, and therefore liable to uncontrollable changes of temperature and extremes of foulness and chilly purity, or they are ventilated by currents of air admitted directly from without, and amounting to draughts. This latter method is as ineffective as it is perilous to health. It makes little difference whether the fresh air enters through gratings in the floor or by open doors—each stream of ingress acts as a jet from a pipe, and is at once projected and attracted towards some point where it can find egress. In theory it should go at once to the point where the density is least, but this anticipation is based on the conjecture that no disturbing forces are at work, whereas other currents, set up by the system, and the great horizontal movement maintained by the multitude of human pumping apparatus, exert a powerful influence on the result. The combined effects of these disturbing forces generally convert the draught into a nuisance, of which those in the vicinity of the ingress are glad to rid themselves. This is why judges interfere with the system of ventilation in Courts, and "selfish" people in crowded rooms open or shut doors and windows apparently at caprice. It is the "system" which is at fault, and the fact that inconvenience instead of comfort is experienced might serve to show the ingenious promoters of ventilation that the whole blame is

due to their own want of success. Then, again, scarcely any one takes into account the back-current, often a down-cast, which occurs at every point of egress. Careless, or too clever, ventilators are fond of ventilating into a chimney, forgetful of the fact that if there is no fire, the shaft is probably all down-cast, or if there be a strong ascending column of heated air, this will be associated with a return stream. The latter not uncommonly forms an investing cylinder in the case of a large fireplace, so that the ventilator opening into the chimney acts as a cunningly contrived device for admitting smoke and half-burnt air into the apartment, with consequences the reverse of advantageous.

Setting aside theories of ventilation, which are for the most part fallacy-traps, especially as applied to places of crowded assembly, it is necessary to make each particular room a subject of study, and, not only the apartment, but all its approaches and communications must be taken into consideration in the contrivance of any scheme. As a rule, the more simple the arrangements can be made the better, and it is a necessity in regard to places with a variable number of occupants that there should be ready means of modifying, not only the amount, but the *force* of the supply. The direct physical effects of a large number of breathing apparatus acting upon a known level should not be ignored, and in planning a scheme it would be worth while to test the efficacy of any system in the manner we have suggested—namely, by observing the behaviour of wreaths of smoke given off as nearly as possible under the conditions which are likely to obtain when the place is occupied by an audience as numerous as may be anticipated. There are *no* great "principles" of ventilation which can be set down and used as formulæ. The task must be accomplished by art or artifice rather than by scientific knowledge, and in too many instances the most expert of ventilators are the least successful.

Annotations.

"Ne quid nimis."

UNIVERSITY OF LONDON: MEETING OF CONVOCATION.

AT the annual meeting of Convocation of the University of London, held on the 14th inst., the new Supplemental Charter, dated the 4th of May, 1878, was laid upon the table, and on the motion of the Chairman was duly accepted. The Report of the Annual Committee having been received, Dr. Pye-Smith moved the following resolution:—

"That while Convocation recognises the advantage of examinations conducted by a body independent of the teachers of the candidates for degrees, it also recognises the fact that examinations exercise an important influence on the course of study pursued in the institutions where the candidates for degrees are chiefly educated, and that, with the view of creating and preserving a harmony between the requirements of the University and the course of study pursued in those institutions, it is expedient that they should be brought into closer connexion with the Senate."

He pointed out that it was almost as injurious to have the teaching bodies utterly severed from the examining as to have them identical. Theoretically, a single degree-giving body for the United Kingdom would be the best desirable; but even if the older English Universities could be prevailed upon to part with their privilege of granting degrees, the long and tedious struggle of the Conjoint Board for medical examinations showed that it would be impossible to extend such a scheme north of the Tweed. Were the teaching bodies brought into closer contact with the University, there would be less reasonable ground of complaint that the University did not pay sufficient attention to the colleges. Dr. Baines seconded the resolution, which was carried almost unanimously. Mr. Hennell then proposed, and Mr. Bone seconded—

"That with this object it is desirable for the Senate to exercise its power under the present charter of revising the list of affiliated colleges, and from time to time of admitting to or excluding from this list according to the position taken by these colleges at the University examinations for degrees, and on such other grounds as the Senate may in each case determine."

This resolution, following necessarily from the first, met with some opposition, but was eventually carried without a division. A third resolution, tending in the same direction, moved by Mr. McDowall, and seconded by Dr. B. Baxter, was also carried:

"That it would be desirable that the educating bodies included in the revised list should be invited to communicate, by delegates or in writing, with the Senate, and that facilities should be afforded to such delegates for deliberating together, and for communicating with the Senate, especially on the subject of examinations."

Dr. Weymouth moved and Mr. Murch seconded the following resolution:—

"That it is desirable for the examiners of the University, either in faculties or collectively, to form a board, one of whose functions would be to consider and report upon any subject connected with the examinations which they might deem of importance to the University."

This was also carried *nem. con.* Dr. Pye-Smith, in moving the next resolution—

"That it is desirable that the University should take advantage of such opportunities as may present themselves of promoting, by the institution of University chairs or otherwise, the cultivation of such higher or less usual branches of study as can be more conveniently, or more efficiently, taught by a central body"—

pointed to the results which had already flowed from the Brown Institution, as affording strong evidence of the utility of the University undertaking the functions of a teaching body in the higher branches of learning and research. The resolution was seconded by the Rev. Josiah Miller, and opposed by Mr. R. N. Fowler, who held that the same work could be better carried out by the colleges where these subjects are already taught. Dr. J. F. Payne strongly supported the resolution, and Professor Carey Foster opposed it. He urged that the fact of being able to encourage his pupils to higher research, and to afford them means for its pursuit, was the great stimulus to exertion on the part of a teacher. The subject had been regarded too much from the point of view of medical education. The University of London was not meant to be a "university" in the strict sense of the term. Mr. Cozens-Hardy moved the previous question, on the ground that the resolution would, in effect, merely add another to the already numerous teaching bodies of the metropolis, where would be taught subjects which nobody cared to learn. It was seconded by Mr. R. Martineau. Dr. Curnow vigorously supported the original resolution, and pointed to the Hunterian lectures of Professor Parker as an example of the kind of work which could only be undertaken by an independent body. Dr. Pye-Smith having replied, a division was taken, when 23 voted for and 39 against the amendment. The original resolution was then carried. The following resolution (especially important to the medical faculty), proposed by Dr. Baxter, was also carried:—

"That it is desirable for the Senate to consider the importance of recognising independent research in the examina-

tions for the higher degrees in such way as the Senate may approve."

On the motion of Mr. Magnus, it was resolved—

"That it is desirable that in any new charter a clause should be inserted giving to the University the power of examining and inspecting schools."

And on that of Mr. W. Shaen—

"That it is desirable that the graduates be represented in the Senate by a larger number of members nominated by Convocation."

This ended the proceedings, during which the attendance of medical graduates had been very scanty.

THE COLLEGE ELECTIONS.

OBJECTIONS have been taken to the method we adopted last week in enumerating the names of the eligible or probable candidates at the forthcoming election at the Royal College of Surgeons. We have usually regarded the Fellowship as determining the order of precedence; but it has been urged that the seniority should date from the original connexion of the candidates with the College—that is, from the Membership. The reason why we have usually followed the plan of reckoning seniority from the Fellowship is because the Fellowship is, as regards the election, the essential qualification both for candidates and voters. But whether preference should be given to the date of the Fellowship or the Membership is, after all, not a very important matter, and may well be left to the Fellows themselves for solution and decision. If the Membership be taken as constituting seniority, the names of the eligible candidates will stand as follows:—Mr. Gay, 1834; Mr. Lund, 1847; Mr. Barwell, 1848; Mr. John Wood and Mr. Bryant, 1849; Sir Henry Thompson, 1850; Mr. Henry Power, 1851; and Mr. Lister, 1852. On the other hand, if the Fellowship be taken, the following will be the order:—Mr. Gay, 1843; Mr. Lister, 1852; Mr. Barwell, Mr. Bryant, and Sir Henry Thompson, 1853; Mr. John Wood and Mr. Power, 1854; and Mr. Lund, 1863. It must be understood that we give the names only of eligible candidates. Some are certain to come forward, but probably not all.

SANITARY SCIENCE IN SPAIN.

SPANIARDS are apt to boast, with what reason we will not stop to discuss, that Spain, in her days of glory, initiated military ambulances, and was first among the nations of the west to found well-regulated hospitals. It seems, however, that the present is strangely unmindful of the past. According to a report, addressed by Dr. Rodriguez Mendez, of Barcelona, to the Paris Société d'Hygiène, the most deplorable indifference is manifested to all sanitary matters. The Spanish doctor receives but a mediocre education, and sanitation is almost entirely neglected. In practice, his opinion on sanitary matters is hardly ever required either by his patients or by the authorities; and whatever advice he might venture to give on such a subject would certainly be disregarded. Even in the Council of Health medical men are in the minority. The functionaries who should watch over the public health hold their appointments through political influence, and not as the reward of personal capacity. They are constantly speculating on the possibility of another revolution, and, knowing that a change of government means a change of functionaries, they become political agents instead of sanitary inspectors. Hence the few laws that exist, relating to the public health, are but rarely enforced. The inspection of ships is a mere pretence. In spite of existing regulations, cemeteries are insufficient, and placed in dangerous positions, while many reservoirs are supplied with poisonous water, though good water is close at hand. The adulteration of food is extensively practised, and the penalties inflicted on the delinquents are so slight that they encourage rather than deter the offenders. Medical men are, as far as possible, excluded from the provincial, municipal, and parochial councils of health, and the members who do compose these bodies are supremely ignorant of the duties they should fulfil, though they often hold high and respectable positions. Under such circumstances, it is not surprising if the doctors themselves neglect and, in fact, fail to study the principles of hygiene. Yet even Spain can boast of a few sanitary reformers. There are two publications devoted exclusively to sanitary matters, and directed by Dr. Letamenti and Dr. Hoffrin, while sanitary questions are also often discussed in the columns of *El Siglo Medico* and the *Revista de Medicina y Cirurgia*. The works of Dr. de Moulan will help to popularise sanitary science, and the labours of Giné prove that there are at least a few persons south of the Pyrenees who prefer prevention to cure.

BRAIN-FEEDING.

WE are glad to find some small tokens that the need of "brain-feeding" is beginning to be recognised by the lay public. For example, it is at length perceived that to perform intellectual work thoroughly men must be supplied with fresh air. This scrap of wisdom has been excogitated in connexion with the controversy about the ventilation of courts of justice. It is not unreasonable to anticipate that in process of time it may dawn on the consciousness of ordinary thinkers that just as muscle is fed and trained for physical exercise, so brain needs to be prepared and sustained in mind-work. It has too long been the fashion to leave the nobler part of man's organisation to struggle with its own peculiar difficulties and supply its special needs as chance might enable it. This policy of neglect was all very well while the strain upon brain-power and work was not relatively inordinate. So long as the brain endured no more than its share of the penalty of labour it might be left to pick up the nutriment it required from the common store supplied to the body as a whole. The faculty of self-repair in the brain was assumed to be equal to the needs of the organ, and in health it proved adequate to the task thrown upon it. Now, however, the equilibrium has been disturbed. The press of work and the strain of worry are so great in these days of hot haste and breathless enterprise, that, except under conditions rarely established and maintained, the power of self-nourishment and repair in the mind-organ is not sufficiently strong to keep it in health. It follows that it must be fed and nourished by special design. An adequate supply of oxygen is the preliminary requirement. Then comes the question of food: and, whatever else may feed the brain, workers with this organ should be assured that alcohol will not sustain it. Alcoholisation and oxygenation are directly antagonistic processes; and even if alcohol be food for the brain, the organ cannot feed when the nutrient fluid circulating in its vessels is disabled from the task of conveying oxygen, which happens whenever spirit is present in more than very moderate proportions in the blood. The relief afforded by alcohol from the sense of depression produced by a lack of oxygen, is, therefore, illusory. It is procured by over-stimulating an organ which is both exhausted and impaired.

MEDICAL VOLUNTEERS.

WE understand that, with one or two exceptions, the answers received from the medical officers of volunteer corps, in reply to a circular from the Army Medical Department, asking if they would be willing to undertake *local* professional duty, under the supervision of the Director-General, have been of the most favourable character. They all seem to be pleased with the idea of being affiliated with the Army Medical Department, as the other officers are

with the military branch. In the event of war, this connexion of the reserve with the active army would be of great value, as it would enable the authorities to send a very large proportion of the medical officers on active service, while the home duties would be efficiently performed by the volunteers, under supervision of the principal medical officers of the various military districts. Thus a valuable bond of union would be created between the medical officers of the regular army and of the reserve forces.

RUPTURE OF THE UTERUS.

AT a recent meeting of the Obstetrical Society three cases of rupture of the uterus were read, which are of considerable interest as illustrating some of the ways in which this accident may happen. The first was communicated by Mr. Marshall, of Colney Hatch. The patient was a multipara at the full term. The labour was lingering, and the breech presented. Uterine pains were throughout slight, and delivery was effected by pulling down the breech by hooking the finger in the groin. The pelvis was roomy, and no difficulty was experienced in effecting the delivery. Some hours before the birth of the child the patient complained of a sharp pain in the lower abdomen, and soon afterwards the face, upper limbs, and trunk became greatly swollen with emphysema. Death took place shortly after the child was born.

The second case occurred in the practice of Dr. Skinner, of Sheffield. The subject was a woman, twenty-three years of age, who had had one child. In the third month of her second pregnancy she experienced sudden pain in the abdomen, and died in two hours without external hæmorrhage. On examination of the body, a small fœtus was found in the cavity of the belly, and portions of the membranes and placenta projected into that cavity, the rest being still in the cavity of the uterus. It would be well to have had a more full and detailed account of the appearances found after death in this case than was offered at the meeting, with a view to settle finally whether it was really a case of intra-uterine or one of interstitial pregnancy. The rupture appeared to have taken place spontaneously, and the history of the case supplied no clue to its cause. In neither of these cases was the seat of rupture examined microscopically with a view to discover the condition of the uterine tissues at the seat of rupture.

The third case was communicated by Dr. Hickinbotham, of Birmingham. A patient, aged thirty-two, in the ninth month of pregnancy fell on a chair. This was followed by such profuse hæmorrhage that she became blanched and pulseless. The blood was found to come from a rent in the posterior wall of the uterus, which admitted two fingers, situated about an inch behind the os uteri. The os was not dilated. The rent was plugged by means of a sponge, and the bleeding was by this means checked. Labour set in two days subsequent to the accident, and the patient made a good though slow recovery.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

THE main features of the Registrar-General's return of the national vital statistics for the first quarter of this year are an increase of emigration and pauperism, and a decline of the marriage and birth rates, together with mortality statistics, which have been favourably influenced by the general mildness of the past winter. The annual death-rate during the three months ending March last was equal to 22·8 per 1000, which, although "slightly higher than the exceptionally low rate in the first three months of 1877, was 1·2 per 1000 below the average rate in the corresponding periods of the ten years 1868-77." The death-rate in the principal urban districts was equal to 24·5 per 1000, while in the rural districts it did not exceed 20·5 per 1000; each of these rates was considerably below the average, but the urban death-rate showed rather more than the usual excess upon the rural rate. In the twenty largest English towns the excess of mortality last quarter was greater than in the rest of England and Wales. Infant mortality showed a considerable excess last quarter, and the proportion of deaths under one year to births ranged in the different counties from 106 and 107 per 1000 in Westmorland and Huntingdon, to 160 in Lancaster, 167 in Monmouth, and 176 in Cornwall. Infant mortality was also excessive in Wales, and among the large towns was exceptionally high in Brighton, Norwich, and Plymouth; the waste of infant life in the towns of Lancashire is again conspicuous. The mortality from the seven principal zymotic diseases differed but slightly from the average mortality in recent corresponding quarters. The excess in the mortality from whooping-cough and measles was balanced by the fatality of scarlet fever, fever, and small-pox being below the average. The marked and continuous decline in the death-rate from typhus and enteric fever affords the most satisfactory evidence of the improving sanitary condition of the country; and the remarkably few fatal cases of small-pox recorded during the quarter, out of London, is one of the most favourable features of the present return. In the hands of earnest sanitary authorities these quarterly health-bulletins of the Registrar-General should be invaluable, as they not only point to the result of sanitary work, but also to the results of sanitary apathy.

DR. ALFRED CARPENTER ON ALCOHOL.

DR. ALFRED CARPENTER'S medical deliverance on Alcohol has not unnaturally excited attention beyond the bounds of the Medical Society. The question is a very large one, with commercial, fiscal, dietetic, physiological relations, besides pathological ones. As an illustration of the commercial aspects of the use and non-use of alcohol, we may say that the Temperance and General Provident Society in thirty-eight years has accumulated a fund of more than two and a quarter millions sterling as the savings and property of surviving members. But the sanitary and medical bearings of alcohol alone explain the interest with which the public regard the subject when treated in a way they can partly comprehend. Dr. Alfred Carpenter showed a decided aversion from those easy assumptions which have been so current with teetotalers. He withheld his assent from the view that there is no utilisation of alcohol in its passage through the body. He would not consent to abolish it as a mere luxury, nor would he assume that because a large dose of alcohol is injurious, a small one would likewise be so. He reviewed the facts ascertained as to its action on the blood, reducing the power of the corpuscles to absorb oxygen, abstracting water from the blood-discs and making them adhere, increasing the coagulability of the fibrinous or plastic part of the blood, and its tendency to be deposited in vessels or organs—effects surely forthcoming when the proportion of alcohol to water in the blood exceeds one part in five hundred, and leading to those morbid appearances with which pathologists are familiar. He maintained that the alcoholic drinks commonly used, and taken, as they commonly are, undiluted, and very often unmixed with food, "must be hurtful." Surprise is expressed that such discoveries have not been made before. This feeling is natural, and we only mean here to say one or two words in reply to it.

The first is this, that physicians are now concerned much about the origin of refined processes of degeneration, the postponement of which is one of the great ends of medicine, and one of the great secrets of longevity. Not content with curing actual and gross disease, they aim at averting any departure from the proper structure of tissues and organs, or

the enjoyment of perfect functional health. They want all men to live longer. In order to do this, the aim must be to prevent disease as well as to cure it. In this way they have come to consider the action of alcohol, and, without going into controversial details, certainly find it to be a most potent factor in producing degenerative changes in tissues.

Our second remark is this: that while the case is made out against any but the slightest use of alcohol, and this with meals, there is a great deal yet to be done by physicians in elucidating the physiological and pathological action of the temperate use. Some recent statistics show, or seem to show, that, according to the experience of the Temperance and General Provident Society, the abstainers are more liable to death by lung disease, by heart disease, by zymotic disease, and by casualties; while moderate drinkers are more liable to death by nervous disease, by liver and kidney disease, and by dropsy. We can well believe, as the same statistics show, that, out of a thousand insurants of the two classes respectively, abstainers and carefully sifted moderate drinkers, four of the latter died to three of the abstainers. We consider that, if anything is made out, it is that any considerable quantity of alcohol, in ordinary constitutions, leads infallibly to mischief. But we want this subject treated carefully, in a truly scientific spirit, as if there were no moral or commercial interests attached to it, feeling assured that the more dispassionate the medical discussion of it the more will it help the cause of health and morals.

UNUNITED FRACTURE OF THE TIBIA.

IN a Clinical Lecture published in a recent number of the *Gazette des Hôpitaux*, M. Duplay alludes to the frequency of delayed and imperfect union after fracture of the upper third of the tibia. In many of these cases there is no constitutional vice to which it can be attributed, and the usual local causes of non-union are absent. It has been stated that fractures above the entrance of the nutrient artery, which is directed downwards, unite less readily than those below it on account of their relation to the blood-supply of the bone. But M. Duplay points out that the upper end of the tibia is the most vascular part of the whole bone, and its nutrition may therefore be presumed to be in a very active condition. He regards, however, this very vascularity of the bone as the cause of the difficulty of union, as, when fractured, the great number of torn vessels pour out an unusually large quantity of blood between and around the broken ends of the bone, which coagulates, and thus impedes or altogether prevents the thorough organisation and ossification of the callus. He states that in these cases he has met with distinct evidence of this extensive effusion of blood.

EPIDEMIC DIPHTHERIA IN WALES.

DURING the first three months of this year 813 deaths were referred to diphtheria in England and Wales, of which 118 were recorded in Wales. The annual death-rate from this disease, which did not exceed 0·12 per 1000 in England, was equal to 0·37 in Wales. Diphtheria was therefore more than three times as fatal in Wales as in England. The deaths referred to diphtheria in Wales, which were 25 and 74 in the last two quarters of 1877, further increased to 118 last quarter. The disease was epidemic last quarter in the village of Hirwain, near Merthyr Tydfil, where 13 fatal cases were registered; in Wrexham and its neighbourhood, where 20 fatal cases occurred; and in several parts of the county of Cardigan. In Cardiganshire no less than 51 deaths from diphtheria were registered during the three months, and as the population of the county probably does not now exceed 74,000 persons, the annual death-rate from the disease within that county was equal to 2·75 per 1000. So far as may be ascertained from the Registrar-General's Quarterly Return, there appear to have been at least three distinct centres of infection in Cardiganshire, of which one is Aberystwith, and the other two are villages, rejoicing in names which are almost impossible to be written, much less to be pronounced, situated in the registration districts of Lampeter and Aberayron.

AN ABLE MEDICAL CORONER.

AN illustration of the difficulty sometimes experienced by coroners in deciding on the line of treatment to be adopted towards certain jurymen who, by their obstinacy and obtuseness, embarrass and hamper the course of the proceedings of the Court, was afforded at a recent inquest held at Ruthin, North Wales, by Dr. Evan Pierce, on the body of an infant who had died under circumstances of alleged neglect. Many of our readers will remember the unseemly interruptions to which the late Dr. Lankester was subjected on several occasions during the conduct of judicial inquiries as to the cause of death, when it was only by adopting a very pronounced *fortiter in re* bearing, verging on the extreme measure of committal for contempt of court, that the promoters of obstruction were reduced to order and submission. At the Ruthin inquest to which we have referred, a persistent attempt appears to have been made to annoy the coroner in the exercise of his function, and to impede the legal procedure, but the project was, we are glad to say, frustrated by the firmness and tact with which Dr. Pierce performed his duty, and vindicated the authority of his office. Dr. Pierce has held the office of coroner for Denbighshire for thirty years, with honour to himself and advantage to the county, and has during that long period conducted several important and difficult cases with such signal success as to call forth encomiums from the magistracy and the press.

EMIGRANT SHIPS.

THE Legislative Assembly of New South Wales has recently caused to be published papers in connexion with an official inquiry held at Sydney on the conduct of the surgeon-superintendent of an emigrant ship. The surgeon was charged on arrival at Sydney with great irregularities. Upwards of twenty witnesses were examined, and ultimately the Board of Immigration were compelled to find him guilty of drunkenness, the use of improper language, and general neglect in the performance of his duty. We notice this case with reluctance, but it appears advisable now and then to remind all concerned that the responsibilities of the surgeon-superintendent of an emigrant ship are very great and very varied, indicating that much care should be used in selecting men for such a post. The surgeon is, in fact, charged with more authority than anyone else on board. He has to look after not only the health of the passengers and crew, but has to see that the food and water are proper in quality and quantity, thus standing, as it were, between the emigrant and the master or owner of the ship. He has also to look after sanitary matters, co-operate with the matron in seeing that morality is maintained, and repress very strictly any infringement of the rules laid down on this head. It is, indeed, the morality question that is often so difficult to deal with. The single women are, of course, as with the other classes, berthed in separate compartments, and have a distinct portion of the upper deck set apart for purposes of work and exercise. Unless great care is used, these precincts are invaded by some of the crew or other passengers, and in this case it appears that the schoolmaster and others were permitted to be on the poop constantly with the single women. This form of irregularity among others the surgeon has full power to stop, even against the dictum of the captain, and, indeed, his powers are in this and many

other respects very autocratic. Medical men proceeding to sea for the first time in charge of emigrants should study well the rules under which they sail, so as to have a full and proper appreciation of their extensive responsibilities.

THE LONDON SMALL-POX EPIDEMIC.

DURING the week ending 11th instant 56 more deaths from small-pox were registered in London and its outer ring of suburban districts, and 183 new cases of the disease were admitted for treatment to the various metropolitan small-pox hospitals. It is true that both these numbers show a decline from those returned in recent weeks, but they betoken the continued activity of the epidemic, and afford abundant evidence of the neglect of vaccination, or of its inefficient performance. The 48 fatal cases in London proper included 21 which were certified by registered medical practitioners to be unvaccinated, including 10 of children under five years of age. Although the proportion of unvaccinated persons in the London population must now be small, the proportion of unvaccinated fatal cases of small-pox continues exceedingly large—so large, indeed, that the opponents of vaccination, with their accustomed recklessness, deny the possibility of so many unvaccinated persons dying from small-pox, and the president of the Anti-vaccination League is exceedingly anxious to be supplied with the names of these unvaccinated deceased small-pox patients in order to try to prove that they had in reality been vaccinated. Whether any of these persons had or had not in infancy been improperly certified as successfully vaccinated, it is certain that when attacked with small-pox they did not bear any marks of successful vaccination, which are indelible.

THE DENTAL PRACTITIONERS BILL.

THIS Bill passed through Committee *(pro formâ)* on Tuesday last. It will now have to be reprinted, with such amendments as its promoters are prepared to allow. We sincerely trust that during the time which must elapse before it can be again brought before the House of Commons, the whole medical profession will do their utmost to insist upon one all-essential point—viz., that no person shall in future be permitted to use the title of "surgeon," either alone or in conjunction with any other word or words, unless he holds the necessary diploma, and is thereby entitled to registration under the Medical Act of 1858. This Act was passed in order to prevent persons who were not duly qualified from calling themselves physicians or surgeons, but the framers of the measure forgot that the Act could be entirely evaded by the use of some such adjunct as dentist, aurist, oculist, accoucheur, &c.

THE UNION OF DIVIDED BLOODVESSELS.

THE union of divided bloodvessels has been carefully studied by Pfitzer in the Institute for Pathological Anatomy at Königsberg. The process was investigated in the rabbit. The wound was found to be first closed by a thrombus containing abundant cells—the "white thrombus" of Zahn. In about twenty-four hours, however, hardly any cells were to be seen, the material closing the wound consisting then only of a homogeneous structureless mass of fibrin. Two days later, the endothelium in the entire circumference of the vessel was swollen, and on the third day connected with the endothelium, and apparently arising from it, a single layer of spindle-cells lay in the fibrinous mass. Beneath the swollen endothelium, close to the wound, were several layers of irregular cells, very different from pus-corpuscles. After this date, the wound adjacent to the lumen of the vessel was closed by this layer of spindle-cells, continuous with the endothelium of the vessel. Next, cells arise in connexion with the adventitia of the vessel, at first round, then becoming spindle-shaped, and ultimately passing into cicatricial tissue. Whether these are developed from pre-existing cells or from cells which have wandered out of the vessel is left uncertain. They become connected with the spindle-cells which have proceeded from the endothelium and subendothelial cell layer. Gradually the cells are transformed into tracts of tissue of cicatricial aspect, and in eleven days only such tissue is to be seen closing the wound. Thus it would appear that a double process takes part in the union. On the one hand there is a proliferation of the endothelium of the vessel, and on the other an inflammatory growth of tissue proceeding from the divided adventitia of the vessel. The participation of the white blood-corpuscles in the process apparently ceases with the formation of the provisional plug.

"THE CASE OF MRS. PICK."

IT is, of course, important to encourage the police, and especially the detective branch, in the skilful and fearless execution of their duties, but something should be done to prevent cases like that of Mrs. Pick. It is probably impossible to pay salaries adequate to the demands of men possessing the instinctive knowledge of character which would spare the community these misadventures. Meanwhile, reform of this deplorably badly organised branch of the public service must be carried to the extent of weeding out the incompetent who pursue honest people, while real offenders are overlooked. It is possible that in this case the detectives who brought the charge against a lady fell into a trap cunningly laid for them. The real culprits may now be exulting in the success of a manœuvre by which suspicion was thrown on the wrong person. And this sort of thing goes on continually because we cannot or will not "afford" to employ men who are able to perform the delicate duties thrust upon them with due regard to justice and efficiency, just as we cannot "afford" to pay enough to keep our detectives proof against the pecuniary temptations to which we expose them.

POISONOUS COLOURED TAPERS.

A CORRESPONDENT gives us the result of an investigation with regard to the possibility of dangerous consequences from the burning of coloured tapers. He says:—

"In the samples which I examined I found that the red contained vermilion, and the green an arsenical green, probably the ordinary Scheele's. It may not be necessary to state that in all probability, on these tapers being ignited, metallic mercury would be liberated in the form of vapour from the *red* tapers, and arsenious acid from the *green*. Either of these bodies I should say might find their way, by means of inhalation, into the system, where they would not be calculated to act beneficially. That these ingredients are used for such a purpose is, to say the least of it, highly objectionable. The vermilion and arsenic were present in dangerous quantity."

The matter is of great moment, and it becomes a duty to give publicity to the warning.

INTEMPERANCE IN LONDON.

THE Registrar-General calls attention to the fact that during the week ending 11th inst. eleven deaths in London were directly referred to alcoholism, and that this number exceeded the corrected weekly average by nine. It appears that of these eleven deaths seven resulted from delirium tremens, and four from intemperance, not otherwise described; all were of persons aged between twenty and sixty years. During last year the deaths referred to intemperance in London were 184, and exceeded the corrected average number in the ten preceding years by 10. The number last year, although smaller than those in 1875 and 1876, when they were 206 and 195, very considerably exceeded the

number in preceding years. The 70 deaths referred to delirium tremens were 27 below, while the 114 referred simply to intemperance exceeded by 37, the respective averages. During the past quarter of a century, in London, as well as in England and Wales generally, the mortality from delirium tremens has steadily declined, but this decline has been nearly balanced by the increase of deaths referred simply to intemperance. It is obvious that the deaths referred in the death register directly to alcoholism represent but a small proportion of the mortality really due to intemperance; the proportion of the returned to the true numbers probably, however, differs little from year to year, or in various localities.

HARVEY TERCENTENARY MEMORIAL FUND.

THE subscriptions now amount to £1600, leaving only about £400 further to be contributed in order that the list may be closed. Amongst the recent donations are the following:—The Royal Medical and Chirurgical Society, 50 guineas; Mrs. Balderson, £25; the Harveian Society of London, 10 guineas (second donation); Professor H. W. Acland, 5 guineas; Dr. Henri Guéneau de Mussy, 5 guineas; Mr. E. Lund, 2 guineas, &c. &c.

THE EDINBURGH UNIVERSITY CLUB.

THE quarterly dinner of this pleasant Club was held at the St. James's Hall Restaurant on Wednesday evening, under the eloquent and genial presidency of Dr. Crichton-Browne. The company was large, the dinner good, and the visitors and guests seemed equally pleased with each other. Major Duncan, in a very neat speech, returned thanks for the Army, Navy, and Volunteers; Dr. Curnow for the Sister Universities, Dr. Ferrier for Medical Literature, and Mr. Adams for the Medical Institutions of London, &c.

THE HEALTH OF LORD RUSSELL.

WE are glad to be able to announce that the improvement in the condition of Lord Russell is maintained at the time of going to press, especially with regard to consciousness and strength. There is also less fever.

IT appears from the report of the Committee of Visitors and of the Medical Superintendent of the West Riding Pauper Lunatic Asylum for 1877 that during the year 466 patients were admitted and 303 discharged, the number under treatment on Dec. 31st being 1413. The Medical Superintendent, Dr. Major, calls especial attention to the part played by alcoholic excess among the inmates, the mental attack in 17·2 per cent. of the cases being induced by indulgence in drink, either alone or in combination with other adverse influences, physical and moral. The practice of discharging patients for a certain period on probation previous to their final release being decided upon, was carried out somewhat extensively, and with satisfactory results. The death-rate during the year was 10·85 per cent. on the average daily number of patients resident. The general health of the institution in the period was good.

THE medical superintendent of the Hants County Asylum, Dr. J. Manley, reports that a large number of patients were admitted into the establishment in 1877 with suicidal propensities. During the early part of the year the attempts at self-destruction were numerous, and caused great anxiety to the officers and attendants. Two inmates accomplished their object under very dissimilar circumstances. Dr. Manley points out that 70 per cent. of the admissions for the year were those of persons suffering from incurable disease, and he urges that many of them are not of the class for whom county asylums were intended.

THE medical officer of health for Worcester, Dr. Strange, in his fourth annual report of the sanitary condition of that city, is enabled to state, as the result of a house-to-house visitation, that great improvement continues to be made in cottage property generally. Roofs have been made water-tight, courtyards better drained, and the interior of houses cleansed and made more wholesome. The death-rate of Worcester in 1877 was 24·05 per 1000 annually. A striking feature in the vital statistics of the period is the large amount of infantile mortality recorded in one particular quarter of the city, the rate reaching the extremely high figure of 53 per cent. This fatality is the more remarkable in that the general death-rate in the district in question was low. Dr. Strange attributes the evil to the poverty, ignorance, and unsettled habits of the inhabitants of the district. Where a high rate of infantile mortality is persistent, it would be well in all cases to make a special investigation into the causes at work, in the same manner as the very thorough inquiry made some time back in Leicester was conducted.

A DEATH-RATE of 42 per 1000 annually in an English town betokens the existence of an amount of zymotic disorders calling for some very energetic measures on the part of the sanitary authorities. Yet, in Carlisle, where such a high mortality prevails, but a very apathetic consideration appears to be given to such pressing questions as the prevalence of fever and the impurity of wells, which were at a late meeting of the authorities brought under notice and discussion. The inspector of the Carlisle Rural District reported that there were ten cases of scarlet fever in two houses in one village, and five cases of typhoid in one house in another village. There was strong presumptive evidence that the well-water of the infected districts was contaminated, yet consideration of the question of analysis and the closure of certain wells was decreed to *stand over for a month!* We are sorry to say that there appeared to be a unanimous concurrence in this dangerous policy of procrastination.

THE election for president, vice-president, council, and secretary of the Royal College of Surgeons in Ireland will take place on the 3rd June. Mr. Smyly, at present vice-president, will succeed Mr. McDonnell as president; and the vice-presidency will be filled by Mr. Mapother, the only candidate before the fellows; whilst Mr. William Colles will no doubt be re-elected secretary. As regards the Council, besides the outgoing members, all of whom, with, we understand, one exception, will offer themselves, there may be expected several others, Messrs. Roe, Jacob, Elliott, and Stoker being additional candidates for a seat on the Council.

SCARLET FEVER and diphtheria have been epidemic for a long time in Brooklyn, U.S. With regard to the first-mentioned disease, the death-records show that it has prevailed for the last six years without intermission, a marked decline, however, being observed during the third, or summer quarter of the year. Diphtheria was very fatal in 1876 and 1877, and was found to depend generally on mal-ventilation and drainage defects.

JAMES BROWN DIXON, of Burdett-road, Limehouse, a registered chemist practising homœopathy, having been prosecuted by the Medical Alliance Association in the Court of Exchequer, under the Apothecaries' Act, for illegally practising as an apothecary, submitted to a judgment on Thursday last for a penalty of £20 and £90 costs. His own costs, which are heavy, he will have to defray as well.

WE have to announce the death, on the 14th inst., of Dr. Henry Jephson, of Leamington.

SOME few days ago the captain of the barque *Chrysolite* was summoned before the Plymouth magistrates, and fined for not providing sufficient lime-juice for his crew on the voyage from Cardiff to Aden and Callao. Several men were landed suffering severely from scurvy, and conveyed to hospital.

COMPARATIVE METEOROLOGY OF WATERING-PLACES.

IN the Report of the Medical Officer of Health for Hastings there is an interesting table, compiled by Mr. Alex. E. Murray, of that town, giving some useful information on the comparative meteorology, for the year 1876, of some of the principal watering-places: Folkestone, Hastings, Buxton, Llandudno, Ramsgate, and Brighton. London has been included for the purpose of comparison. All the observations, with the exception of London and Brighton, were taken under the direction of the Meteorological Office or the Meteorological Society.

The accompanying table shows that Ramsgate possesses special climatic advantages. Its mean temperature in the shade is second on the list, whilst the daily range of temperature is the lowest, and it has the smallest rainfall and the fewest rainy days. After Ramsgate, the next on the list is certainly Hastings, which runs the former very close indeed in respect to the advantage of having only small fluctuations of the daily temperature. We should like to see this list extended by the inclusion of other watering-places, and the addition of observations on the character of the prevailing winds and their force.

	Folkestone.	Hastings.	Buxton.	Llandudno.	Ramsgate.	Brighton.*	London.*
Temp. in shade, mean of 9 A.M. & 9 P.M. observations	49·4	49·2	45·5	50·1	50·5	50·0	50·5
Degree of humidity do. (degrees 0—100)	87·6	84·9	85·1	79·0	85·4	80·9	80·3
Cloud do. („ 0—10)	6·0	6·0	7·4	6·3	6·3	6·7	6·3
Extreme maximum temperature ..... degrees	?	80·1	85·9	86·6	85·9	84·5	92·6
Extreme minimum temperature ..... „	?	29·9	10·9	22·2	23·5	22·6	18·9
Daily range ..... „	?	10·8	13·7	12·2	10·7	11·1	15·0
Rainfall ..... inches	29·14	32·12	35·05	34·41	24·21	31·87	28·16
Rainy days—i.e., the smallest measurable amount of rain or dew	171	208	213	170	141	160†	173†

* Brighton and London are from the Registrar-General's Report. 50·0 and 50·5 are the mean temperatures, according to Glaisher's formula, and are about half a degree higher than the 9 A.M. and 9 P.M. mean. The degree of humidity and amount of cloud have also received corrections.
† 0·01 inch and upwards.

Correspondence.

"Audi alteram partem."

THE COUNCIL ELECTION AT THE COLLEGE OF SURGEONS.

To the Editor of THE LANCET.

SIR,—Mr. Alfred Baker has rightly conjectured that my letter in your issue of April 27th referred to himself. In reply he sends what he calls an emphatic denial of my imputations and statements, but it is clear that Mr. Baker has not met the point at issue. His denials are certainly emphatic, but by misapplying my words they simply fence round the question. He states:—

1st. That he never fathered any scheme by which the operation of the laws of the College might be eluded.—This simply records his opinion of the scheme.

2nd. That he never advised anyone to obtain the Fellowship and diploma of the Faculty of Physicians and Surgeons of Glasgow.—That he never gave such advice is not even suggested in my letter. It was not necessary.

3rd. That he does not know that such a degree would admit to that of the English College.—Of course he does not; in fact, I should think he now knows to the contrary.

4th. Within his knowledge he has supported no measure tending to an abasement and depreciation of the value of the diploma of the College.—This I do not dispute. He might not regard the step as having this tendency.

My charge is this: That a certain candidate for the office of assistant-surgeon to the General Hospital was appointed under circumstances that were disqualifying, and that Mr. Baker was a party to this election, though fully aware of the circumstances; that he made use of his position on the Council of the College in an unfair manner, to remove the disability; and, further, that the unfairness consisted in his bringing forward or ventilating the efficacy of a plan, that the said candidate should be admitted to the Fellowship of the English College after having obtained that of the Faculty of Physicians and Surgeons of Glasgow.

If Mr. Baker is in a position to give a categorical denial to this, I will at once retract what I have stated.

I remain, Sir, yours, &c.,

Birmingham, May 14th, 1878. BENNETT MAY.

THE CAUSE OF DEATH OF THE LATE ARCHBISHOP WHATELY.

To the Editor of THE LANCET.

SIR,—My attention has just been called to the report of the meeting of the General Medical Council in THE LANCET of April 27th. Sir Dominic Corrigan, in speaking to his motion on section 2 of Clause 14 of the Medical Bill, is therein reported, among other things, to have said:—"Archbishop Whately was a noted homœopathist. He had a varicose ulcer on his leg, and insisted on having none but homœopathists to attend him. He was found dead in his bed, floating in his own blood, because homœopathists would not permit the use of an instrument."

With reference to this statement, allow me to say that I attended the late Archbishop Whately in his last illness, and that Sir Dominic Corrigan has been entirely misinformed as to the nature of his disease and the cause of his death. The disease was senile gangrene. It commenced about the last week in June, 1863, by a small spot on the tendo Achillis, a couple of inches above the heel, spread gradually upwards, destroying the gastrocnemius muscle and its tendon, and left the deeper layer of muscles bare and clean. On the 6th of October his Grace became inarticulate from complete exhaustion, but in full possession of his mental faculties, responding by gesture to questions put to him. On the morning of the 8th of October he sank about ten minutes to twelve.

After death I removed the dressings which had been applied to the leg the day before, and discovered that a small vessel had given way, allowing the escape of an ounce and a half, or at most two ounces, of blood.

No one could suppose that Sir Dominic Corrigan would willingly misstate facts. I trust, therefore, you will, for his sake, kindly give publicity to this letter.

I remain, Sir, your obedient servant,

W. B. B. SCRIVEN, M.B. T.C.D., M.R.C.S.I.

Dublin, April 8th, 1878.

REMARKABLE CASE OF PISTOL-SHOT WOUND.

To the Editor of THE LANCET.

SIR,—I send a brief outline of a remarkable case, should you think it worth recording.

On the morning of the 15th of March, 1878, Y. Z.—— attempted suicide by discharging a revolver just below the

region of the heart. The bullet entered the lower border of the fourth intercostal space, on a line one inch below the left nipple, and an inch and a half to the right of it; it traversed the lung, passing obliquely upwards and outwards, emerging from the chest near the posterior fold of the armpit, but deeply imbedded in the soft parts. I saw him within half an hour afterwards; he was then in a state of collapse, with some difficulty in breathing, and expectorating frequently small quantities of blood and mucus; the wound in front was ovoid, the surrounding skin being much charred for an inch around the opening; about the posterior fold of the armpit there was some extravasated blood and emphysema to a small extent. He was placed in the semi-erect position, and took small pieces of ice frequently. He remained in the state of collapse from sixteen to seventeen hours, and during the day had small quantities of iced beef-tea and milk. He passed a restless night. The following day he complained of great soreness in the chest; the respiration did not exceed 28 per minute, the pulse was 84, and the temperature natural; with the exception of distant fine crepitation, the breath-sounds were scarcely affected. The case proceeded favourably from day to day, the sanguineous expectoration lessened daily, and ceased on the eleventh day. He now complained of pain and tenderness where the bullet had lodged, and as he was anxious for it to be removed, I extracted it on the twelfth day (I enclose it for your inspection). From the indentations on it it must have impinged on one of the ribs before its exit from the posterior wall of the chest. The wound in front was healed by the twenty-second day, and he felt no inconvenience from the rash act, and he was mentally calm throughout.

I am, Sir, yours, &c.,

Croom's-hill, Greenwich, S.E. GAY SHUTE.

MISS FLORENCE LEES' DRAWING-ROOM LECTURES TO LADIES ON NURSING.

To the Editor of THE LANCET.

SIR,—I beg leave to call your attention to the accompanying prospectus of a course of lectures announced to be given by Miss Florence Lees to ladies under the auspices of the Ladies' Sanitary Association.

I especially wish to point out that this instruction is intended for ladies who are anxious to qualify themselves to tend such cases of illness as they may fairly expect to meet with in their domestic circles, and not for such persons as hope to become professional nurses. The course is called "Six *Drawing-room* Lectures," and is to be given at the residence of Mrs. Cowper-Temple. Lecture 6 in this course is thus announced in the syllabus:—

"Obstetric nursing. Syringing per vaginam. Passing speculum. Method of passing vaginal tube. Various applications for syringing. Plugging, and, when required, leeches to os uteri. *Removal of syphilitic growths*, &c. &c."

This course will probably be attended by mothers of families, but I know of nothing to prevent such ladies taking their daughters with them, or to prevent other single ladies from presenting themselves amongst the audience. I wish to offer my very firm protest against the gross impropriety which Miss Lees proposes to commit, and to express my regret that such a syllabus should already have been circulated amongst private families.

To say nothing of the gratuitous assumption that some of the teaching as proposed in Lecture 6 is necessary even for professional nurses, the indelicacy of introducing such matters to the notice of "*ladies*" at a "*drawing-room course*" is, I hold, sufficiently apparent.

I make these observations with the highest regard for Miss Lees' own skill and knowledge, and in the fervent hope that she may see fit to reconsider and alter this improper and unnecessary portion of her syllabus.

I am, Sir, your obedient servant,

Grafton-street, Piccadilly. DYCE DUCKWORTH.

THE ONE-PORTAL SYSTEM.

To the Editor of THE LANCET.

SIR,—It is much to be regretted that there should be still some amongst our examining bodies who continue to question the expediency of supporting the proposed "conjoint scheme," when circumstances but too plainly indicate the legislative changes in prospect should a speedy solution of the present difficulty not be arrived at. The arguments brought forward against the measure by certain of the Scotch representatives at the Medical Council seemed, after all, to be mainly intended, and perhaps not unnaturally, to avert the blow which its incautious adoption was regarded as being likely to bring down upon them.

That the Scotch universities have done much for the profession few probably will doubt, but that they should stand in the way of any scheme for furthering the good work they themselves have helped to establish is, to say the least of it, inexcusable.

Is there, however, no common ground upon which some favourable compromise might be safely effected? Some scheme, for instance, which, in the title of the qualification, and with a minimum fee for examination, would offer sufficient protection to all the universities and corporations in the kingdom?

I would propose that the primary qualification for the purpose of registration should be simply that of licentiate in medicine—Lic. Med.,—and that the fee should stand at £10 10s.

My reasons for this suggestion are the following:—

1. It will do away with the necessity of a multiplicity of titles, particularly in the case of future consultants.

2. Men who at present swell the ranks of unqualified assistants might be induced to qualify in larger numbers.

3. The bulk of the profession would not be content to go out into the world with so insignificant a title, but would, as heretofore, seek higher qualifications.

And, lastly, the fee already paid would go towards the amount at present demanded for the above, each examining body having previously benefited in part through the Conjoint Board.

I fear I have trodden upon very delicate ground even in this short communication, but I have ventured upon it in the hope that some abler individual might take up the idea and found something better upon it.

I remain faithfully yours,

May 7th, 1878. A GRADUATE.

Obituary.

THOMAS CARR JACKSON, F.R.C.S.

WE much regret to have to notice the death of Mr. Thomas Carr Jackson, which occurred at his residence, Harley-street, on the 23rd of April, at the early age of fifty-five. Mr. Jackson had for some time past been in indifferent health, and last autumn he resigned his chair as President of the Harveian Society in order to try the sea breezes at St. Leonards. Latterly he had much improved in appearance, but the amelioration was only temporary, and he ultimately succumbed on the day mentioned. He was born in Yorkshire, and received his general education at the Merchant Taylors' School in London. Afterwards he selected the medical profession, and became a pupil of Mr. James Garstang, of Lytham, Lancashire. Later on he entered St. Thomas's Hospital, and in time was appointed dresser to the late Mr. Joseph Henry Green. In 1845 he obtained his diploma of M.R.C.S., and was elected house-surgeon to the Royal Free Hospital, and not long afterwards assistant-surgeon to the same institution. He, however, did not long hold the office, but voluntarily resigned it. In 1857 Mr. Jackson obtained, by examination, the Fellowship of the College, and was shortly afterwards appointed surgeon to the Great Northern Hospital, which post he held till his death. He was also surgeon to the National Orthopædic Hospital, to the Great Northern Railway, and to the London, Chatham, and Dover Railway; likewise consulting-surgeon to the Luton Cottage Hospital, and the Central Pancras Provident Dispensary. For nearly a quarter of a century he held the post of medical adviser to the British Equitable Insurance Company.

Mr. Jackson was, as we have said, a Yorkshireman, and the special characteristics which distinguish the natives of that county were largely represented in him, and were manifested at every point of his individuality. Hence the vigour, impulsiveness, decisiveness, frankness, and warmth of heart which were eminently his. He was essentially a practical surgeon. That he could write if he chose, however, was shown by the appearance of an able essay "On Circumscribed

Abscess of Bone," and by a well written paper entitled "Cursory Observations on Lithotomy." Mr. Jackson was a born lithotomist, and was wonderfully successful in his operations, having cut twenty-eight patients without a death. It was a treat to converse with him on his favourite theme—lithotomy,—of which he was quite a master. He has left behind him five children and numerous friends to lament his loss, but as he is succeeded in the profession by his eldest son, it may be said, "Uno avulso non deficit alter."

JOHN NORTHON THOMPSON, M.R.C.S., L.S.A.

MR. THOMPSON died suddenly, at his residence at Nottingham, on April 19th, in his seventy-eighth year. He received his medical education at Edinburgh and St. Bartholomew's Hospital, London, and obtained the licence of the Apothecaries' Company in 1824, and the diploma of the College of Surgeons of England in 1825, this latter bearing the signatures of Blizard, Abernethy, and Astley Cooper. Mr. Thompson first settled in practice at Kingsclere, Hants, but removed in 1832 to Nottingham, where he succeeded his relative Dr. William Williams. In 1835 he was appointed honorary surgeon to the Nottingham Dispensary, and in 1848, after a close contest, he obtained the appointment of surgeon to the borough gaol, which he held for a period of twenty-seven years. Mr. Thompson retired from general practice in 1870. His loss will be severely felt, but more especially by his many private friends, to whom he was endeared by every social and domestic virtue.

WILLIAM ALBAN ATWOOD, M.R.C.S.

A SHORT notice of the career of the above amiable and widely-known member of the medical profession will, no doubt, be acceptable and interesting to those of his professional brethren and others whose good fortune it was to know him in life.

The late Mr. Atwood was the second son of J. J. Atwood, Esq., solicitor, Aberystwith, where he was born in 1832, and who still survives him. In early life he had some idea of going into the Church, but being adventurously inclined, the attractions of Australia on the discovery of gold there were too great to be resisted, and thither he went and remained some three years. This was the time of our war with Russia, when, being offered a commission in Her Majesty's army, he resolved to return to England in order to serve his country in the Crimea, but before reaching home he learnt by newspapers received from a passing vessel that Sebastopol was taken and the war over. It now became necessary for him to seek another path in life, and, on the advice of a valued and intimate friend, he decided to adopt medicine for his profession, and entered as a student at St. Bartholomew's. Mr. Atwood was admitted a member of the Royal College of Surgeons of London in 1860, and immediately on obtaining his diploma commenced private practice at Notting-hill, where he resided till his death, which took place at Ramsgate on Sunday, the 7th ult., suddenly from apoplexy.

JOHN JOB, M.R.C.S. ENG., L.R.C.P. LOND.

THE subject of this notice was born at Redruth, in Cornwall. He received his professional education at the London Hospital, the medical school of which he entered in October, 1871. In 1874 he became a member of the Royal College of Surgeons, and in 1877 a licentiate of the Royal College of Physicians of London. After becoming qualified, he for some months assisted Mr. Emson, of Dorchester, in his practice. In April, 1875, he was appointed house-surgeon to the London Hospital, the duties of which post he discharged so well that when the term for which he was appointed expired an additional period was granted to him. He then became senior assistant-surgeon to the Dowlais Ironworks Company, Glamorganshire, and here he remained until his death. While in attendance upon a bad case of typhus fever, he himself caught the disease, which ended fatally on the eleventh day. He died on March 28th, 1878, aged twenty-seven years and six months. He was buried at Redruth on April 1st. Out of respect to his memory, nearly all the shops in the town were closed, and all classes were represented at the funeral.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen have been admitted Fellows of the College:—

Allchin, Wm. Henry, M.B. Lond., Wimpole-street.
Bruce, John Mitchell, M.D. Lond., Queen Anne-street.
Curnow, John, M.D. Lond., Warwick-street, Charing-cross.
Galabin, Alfred Lewis, M.D. Camb., St. Thomas-street.
Guy, Thomas, M.D. Heidelberg, Shaftesbury-road.
Orange, William, M.D. Heidelberg, Broadmoor, Wokingham.
Ralfe, Charles Henry, M.D. Camb., Queen Anne-street.
Roberts, David Lloyd, M.D. St. And., Manchester.
Sansom, Arthur Ernest, M.D. Lond., Devonshire-street.
Sykes, John, M.D. Edin., Doncaster.
Thudichum, J. Louis Wm., M.D. Giessen, Pembroke-gardens.
Wiltshire, Alfred, M.D. St. And., Wimpole-street.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at meetings of the Board of Examiners on Monday, Tuesday, and Wednesday last:—

C. E. Jennings, Lawrence N. Walker, and Arthur R. Raine, London Hospital; Arthur Sharland, Richard J. Horn, and Robt. W. Gentles, Middlesex Hospital; William E. Ryves, Thos. W. C. Jones, Ernest O. Wight, B. Thornton, Edward A. Wood, and L. Edmund Wood, St. Mary's Hospital; George L. Johnson, William Slater, and E. A. S. Elliott, St. Bartholomew's Hospital; Arthur Grayling, William W. Pope, and L. Robert Colledge, St. George's Hospital; William C. Fenwick, Alfred C. Otway, Henry E. Archer, Henry W. Campbell, Thos. R. Atkinson, Walter C. Hearnden, J. G. Wilson, O. J. Currie, T. F. Barton Palmer, Edw. D. R. Fasken, Edgar Elliott, and Wm. H. Crosse, Guy's Hospital; George Nicholson and Frank E. C. Houghton, King's College; Duncan Duncan and William Chisholm, University College; Charles Torbitt, Walter J. C. Clarke, and A. F. Clay, Birmingham; Edward T. Palmer, St. Thomas's Hospital; Roger W. Barrow, Liverpool; Joseph M. Prendergast, Cork and Guy's Hospital.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on May 9th:—

Blackwell, Frederick William, Birmingham.
Good, William Ernest, Dorchester.
Mayne, Walter Furlong, Honiton, Devon.
Mellor, Thomas, Bury, Lancashire.
Mistri, Kavasji Mormasji, Bombay.
Thomas, William Frederic, Madras.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.—DOUBLE QUALIFICATION.—The following gentlemen passed their final examinations and were admitted L.R.C.P. Edin. and L.R.C.S. Edin. during the April and May sittings of the Examiners:—

Ady, James Charles, Moulmein, Burmah.
Anderson, Adam, Co. Donegal.
Annand, George, Melbourne.
Boe, James Steele, Dunblane.
Brayton, Thomas, Whitehaven.
Burgess, John Thomas, Spilsby.
Burman, Charles Clark, Whitehaven.
Chestnutt, John, Tralee.
Chilton, Maurice Alfred, Wiltshire.
Collie, Mackintosh, Elgin.
Coombs, Samuel Wellesley, Oswestry.
Cream, Thomas Neil, Glasgow.
Creswell, William George, Berkshire.
Curtin, John O'Brien, West Newcastle.
Dawson, Alfred Stanhope, Croydon.
Dixon, Francis, Derbyshire.
Eakins, James Edwin, Newburgh, Canada.
Elder, William Nicol, Elginshire.
Fraser, John Joyner, Tain.
Gordon, John Joseph, Co. Sligo.
Hartley, James, Marton.
Honeyman, John Hay, Thurso.
Hosking, James Mithiel Phillips, Cornwall.
Jack, Robert Nelson, Newton-Stewart.
Jack, William George, Dunkeld.
Jee, Charles, Spilsby.
Johnston, Charles Mason, Port Louis, Mauritius.
Lamson, George Henry, New York.
Logie, William Alexander, Kirkwall.
Logan, Robert, Dumfries.
Macaskie, James Griffith, Berwick-on-Tweed.
Maclean, Kenneth, Stornoway, Lewis.
Mallory, Albert Elhanan, Cobourg, Ontario.
Maunsell, Edward Lewis, Edinburgh.
M'Callum, Edward, Edinburgh.
M'Enery, David, Clonmel.
Moore, John Wilson, Drogheda.
Moynihan, Thomas, Cork.
Murray, John James Goodlatte, Dublin.
O'Sullivan, Daniel, Killarney.
Pilgrim, Frosier John, Barbadoes.
Reid, Robert Stuart, Dunedin, N.Z.
Robertson, John, Kilmorack, Inverness.
Robertson, William Duncan, Montreal.
Saunders, Herbert, London.
Service, John, Kilwinning.
Simpson, Robert Parkin, Lincolnshire.

Smith, Frederick Aubrey, Manchester.
Somerville, Andrew Thomas, New Brunswick.
Steel, James, Bushmills.
Tant, John Yellowlees, Argyleshire.
Thelwall, Llewellyn, Wrexham.
Vickerstaff, William Henry, Macclesfield.
Williams, Josiah, Cardigan.
Wright, Francis George, Southsea.

The following gentlemen passed their first professional examination at the same time :—

William Thos. Waterson, Netherwitton; William Stevenson, Stirlingshire; Ralph Kinder, Manchester; Marcus Calder, Glasgow; David Carruthers, Kirkpatrick-Fleming; Arthur Neol, Brighton; David Henry Walsh, Bristol; Wm. Chalmers Cowan, Dundee; Wm. Bain, Caithness; Wm. Thomas Thompson, Worcestershire; Gerald Fitz-Gerald Thomas, Cork; Egbert Williams, Llandilo; Edwin Faulkner, Bangalore, India; Henry Joseph Clements, Co. Kerry; Richard Blair Cullin, Dublin; Robt. William Anderson, Portsmouth; John M'Nicoll, Liverpool; William Cochrane Corbett, Co. Cork; Arthur Hyde Burtton, Devonshire; Fredk. Herbert Daly, Dublin; Michael Kelly, Limerick; Geo. Cuthbert Clarke, Middlesex; Jas. Murdoch Cameron, Edinburgh; Perceval Crawford Boyd, Hobart Town; John Crawhall Nichol, Co. Durham; Thomas Henry, Co. Tyrone; Charles Wesley Wilson, Ulverstone; Hugh Davies Jones, Anglesey; Thomas Morgan Martin, Dublin; Thomas Matthews, Co. Down.

ROYAL COLLEGE OF SURGEONS, EDINBURGH. — The following gentlemen passed their final examination and were admitted Licentiates of the College during the April sittings of the Examiners :—

Barnes, Raglan Wykeham, Aylesford.
Bestall, Charles Albert, Wicklow.
Bowker, Edward Harwood, Derbyshire.
Catheart, Charles Walker, Edinburgh.
Collie, David, Edinburgh.
Dickson, Hanmer, Tripoli, N. Africa.
Harley, Henry Raby, Cork.
Henderson, Alexander, Perthshire.
Mulligan, James, Dromore.
O'Mullane, Eugene Joseph, Mallow.
Scongal, Edward Fowler, Cheltenham.
Walker, Thomas Charles, Linlithgowshire.

At the same time the following gentlemen also passed their first professional examination :—

William Albert Maurice de Matteville, Berne; Alexander Henderson, Perthshire; Isaac Williams; John Tubb Thomas, Pontypool; William Doughty, Shropshire.

COLLEGE OF PHYSICIANS IN IRELAND. — At the May examinations the following obtained the licences in Medicine and Midwifery :—

MEDICINE.—Ann Elizabeth Clark, Terence Humphreys Sweeny.
MIDWIFERY.—Ann Elizabeth Clark, Frederick Alex. Hyne, Terence Humphreys Sweeny.

THE will of Dr. John Roberts, of Upper Norwood, has been proved under £16,000.

PROFESSOR TICHBORNE has been elected President of the Pharmaceutical Society of Ireland in the vacancy caused by the resignation of Sir Dominic Corrigan.

THE Governors of the South Devon and Cornwall Hospital at Plymouth are in treaty for a piece of land whereon to erect a new and more commodious building.

SIR FRANCIS GOLDSMID'S WILL.—University College, London, and University College Hospital, gain between them £50,000 by the will of the late Sir Francis Goldsmid, M.P.

MR. JOHN JONES, of Welshpool, has been presented with a tea-service and tray and a congratulatory address by the members of the Royal Prince of Powis Lodge of Oddfellows and the Loyal Prince Llewelyn Lodge of Druids, to both of which he is medical officer, upon the occasion of his marriage.

BEQUESTS, &c., to MEDICAL CHARITIES.—The Dundee Infirmary and the Montrose Infirmary have each become entitled to £484 5*s.* 10*d.* under the will of Mr. John M'Combie, quartermaster of the Forfar and Kincardineshire Militia Artillery. Mr. Charles Seely, M.P. for Lincoln, has given £200 towards the new dispensary.

ROYAL COLLEGE OF SURGEONS IN IRELAND. — The following were elected by the Council on Tuesday, the 7th inst. :—Examiners for Letters Testimonial and Fellowship: Benjamin W. Richardson, Edward A. Stoker, John Barker, Edward O'Grady, William O'Leary, William Thomson, Robert L. Swan, William Wheeler. Examiners for Diploma in Midwifery: Henry Croly, John Rutherford Kirkpatrick, William J. Smyly. Examiners in General Education: Frank J. Davys, Michael J. Malone, Robert Morton.

Medical Appointments.

ALLCHIN, W. H., M.B., M.R.C.P.L., has been appointed Lecturer on Physiology at the Westminster Hospital Medical School, vice Maclure, resigned; and also Dean, vice Cowell, appointed Treasurer.

APPLEYARD, J., M.B., F.R.C.S.E., has been appointed an Assistant-Surgeon to the Eye and Ear Hospital, Bradford, Yorkshire, at £52 10*s.* per annum, vice Goyder, resigned.

BEVERLEY, W. H., L.R.C.P.I., M.R.C.S.E., has been appointed Resident Medical Officer to the Worksop Dispensary.

CARR-JACKSON, E., L.R.C.P., M.R.C.S., has been appointed Medical Officer to the British Equitable Assurance Company.

DRUMMOND, D., M.D., has been appointed a Physician to the Newcastle-upon-Tyne Infirmary, vice Embleton, resigned.

FLOYER, B. B., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Blakesley District of the Towcester Union, at £60 per annum and fees, vice Dawson, resigned.

FORBES, D., M.B., L.R.C.S.Ed., has been appointed House-Surgeon to the Bootle Borough Hospital, vice Davis, resigned.

GRAHAM, C. R., M.R.C.S.E., has been appointed Junior House-Surgeon to the Royal Berkshire Hospital, Reading.

HUME, G. H., M.D., L.R.C.S.Ed., has been appointed a Surgeon to the Newcastle-upon-Tyne Infirmary, vice Russell, resigned.

JOHNSTON, R. C., M.B., C.M., has been appointed a House-Surgeon to the Edinburgh Royal Maternity Hospital.

JONES, L., M.D., C.M., L.R.C.P.Ed., has been appointed Medical Officer of Health for the Blackpool Urban Sanitary District, Lancashire, at £100 per annum, vice Bird, resigned.

KEILLER, A., M.D., F.R.C.P.Ed., is Physician to the Edinburgh Royal Maternity Hospital for the current quarter.

MACKAY, W. B., L.R.C.S.I., L.K.Q.C.P.I., has been appointed Medical Officer, Public Vaccinator, &c., for the Glencullen Division of the Dundrum and Glencullen Dispensary District, Rathdown Union, at £110 per annum.

MACKINTOSH, A., M.D., has been appointed Medical Officer of Health for the Newbold-cum-Dunston Urban Sanitary District, Derbyshire.

MACPHERSON, F. A., L.R.C.P.Ed., L.R.C.S.Ed., Assistant House-Surgeon to the North Dispensary, Liverpool, has been promoted to be House-Surgeon.

MACPHERSON, J. B., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed an Assistant House-Surgeon to the North Dispensary, Liverpool, vice F. A. MacPherson, L.R.C.P.Ed., promoted.

MARSH, W. J., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Royal Cornwall Infirmary, Truro, at £200 per annum, furnished rooms, &c., vice Harris, resigned in ill-health.

MAUNSELL, J., M.D., L.R.C.S.Ed., has been appointed Resident Medical Officer to the Eastern Dispensary, Bath, at £100 per annum, furnished apartments, &c., vice Walcott, resigned.

MEEHAN, J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed a Visiting Medical Officer to the Limerick Union Workhouse, at £75 per annum, vice O'Connor, resigned, on appointment to No. 1 District, Limerick Dispensary District.

MITCHELL, D., L.R.C.S.I., L.K.Q.C.P.I., has been appointed an Assistant House-Surgeon to the North Dispensary, Liverpool, vice Gorst, resigned.

MORGAN, J. H., M.A., F.R.C.S., has been appointed Assistant-Surgeon to the Hospital for Sick Children, Great Ormond-street, vice Haward, resigned. Also Assistant-Surgeon to the Hospital for Hip Disease in Childhood, vice Butlin, resigned.

MURRELL, W., M.R.C.P.L., has been appointed Lecturer on Practical Physiology and Histology, vice Allchin.

O'CONNOR, P., M.D., C.M., has been appointed an Assistant House-Surgeon to the South Dispensary, Liverpool, vice Woods, resigned.

POUNTNEY, W. E., M.B., C.M., has been appointed Medical Officer of Health for the Lytham Urban Sanitary District, and the Preston Port Sanitary District, for six months, at the rate of £55 and £5 per annum, vice Bird, resigned.

ROBERTSON, F. F. L., M.B., C.M., M.R.C.S.E., has been appointed Medical Officer to the Medical Aid Association of Friendly Societies, Bradford, Yorkshire, vice Meyrick, whose appointment has expired.

SAUL, W. W., M.D., M.R.C.S.E., L.S.A.L., has been appointed an Honorary Medical Officer to the Lancaster Infirmary.

SMITH, A. L., M.D., M.R.C.S.E., has been appointed Assistant Resident Medical Officer to the East London Hospital for Children and Dispensary for Women, vice Cæsar, appointed Resident Medical Officer to the Victoria Dock District Provident Dispensary.

SMITH, C. R., M.B., M.R.C.S.E., has been appointed House-Surgeon to the Westminster Hospital, vice Neale, appointed Surgical Registrar.

STEPHENS, E., L.R.C.P.Ed. & L.M., M.R.C.S.E., has been appointed Medical Officer of Health for the Chard Rural Sanitary District, at £50 per annum, vice Barnes, resigned.

STODDART, W. W., F.C.S., has been appointed Public Analyst for the City of Salisbury, at £25 for one year.

STOKES, Mr. A. W., has been appointed Public Analyst for the Parish of Paddington, at £150 per annum, vice Anderson.

TURNER, R. S., M.D., L.R.C.S.Ed., has been appointed Medical Officer for the Parish of Keith, Banffshire, vice R. Turner, M.D., deceased.

WADSWORTH, C., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the No. 2 Sub-district of the Belfast Dispensary District of the Belfast Union.

WALKER, Mr. H. U., has been appointed a House-Surgeon to the Edinburgh Royal Maternity Hospital.

WELLS, C., L.S.A., has been appointed Obstetric Assistant to the Middlesex Hospital, vice McIntyre, resigned.

WILLS, D., M.D., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Droitwich District of the Droitwich Union, and Medical Officer to the Loyal Packington Lodge of Odd Fellows, and to the Philanthrophic Society, Droitwich.

YOUNG, R., M.D., has been appointed an Assistant-Physician to the Newcastle-upon-Tyne Hospital for Diseases of Children, vice Wicks, appointed a Physician.

Births, Marriages, and Deaths.

BIRTHS.

ASHE.—On the 8th inst., at Dundrum, the wife of Isaac Ashe, M.D., of a daughter.

GREENE.—On the 3rd inst., at Beverley, the wife of Richard Greene, L.R.C.P., of a son.

HAYES.—On the 8th inst., at Basingstoke, the wife of Hawkesley Roche Hayes, L.R.C.P.I., of a son.

MCVAIL.—On the 7th inst., at Kilmarnock, the wife of John C. McVail, M.D., of a son.

NAPIER.—On the 7th inst., at Fraserburgh, Aberdeenshire, the wife of Dr. A. D. L. Napier, of a son.

RIGDEN.—On the 11th inst., at Montpellier-square, the wife of Walter Rigden, M.R.C.S.E., of a daughter.

RUTHERFORD.—On the 10th ult., at Shipley, near Leeds, the wife of John James Rutherford, L.R.C.P.Ed., of a son.

SLATER.—On the 8th inst., at Evesham, the wife of John Samuel Slater, M.R.C.S.E., of a daughter.

WOOD.—On the 10th inst., at The Priory, Roehampton, the wife of W. E. R. Wood, M.B., of a daughter.

MARRIAGES.

BUCKELL—GRIFFIN.—On the 15th inst., at Ledbury Parish Church, by the Rev. J. Jackson, Rector, Dr. J. William Buckell, of Ledbury, to Dora, second daughter of William Griffin, Esq., Surgeon, of Ledbury.

ORMEROD—MILNER.—On the 9th inst., at St. Stephen's, Dulwich, Joseph Arderne Ormerod, M.B., M.R.C.P.L., to Mary Ellen, daughter of Edward Milner, Esq.

DEATHS.

BERNARD.—On the 6th inst., at Clifton, James Fogo Bernard, M.D., aged 71.

BYRNE.—On the 18th ult., at Kilsallaghan, co. Dublin, William Charles Byrne, L.R.C.S.I., aged 68.

CLARKE.—On the 19th March, at Ararat, Victoria, Andrew Clarke, M.B., Medical Officer to the Ararat Hospital, aged 34.

COXE.—On the 9th inst., at Folkestone, Sir James Coxe, M.D., a Commissioner in Lunacy for Scotland, aged 67.

DUNCAN.—On the 24th February, at Adelaide, South Australia, Handasyde Duncan, M.D., aged 66.

LESLIE.—On the 5th inst., at Thurlow-road, Hampstead, Walter Alexander Leslie, M.R.C.S.E., Surgeon-Major, Madras Army (retired), aged 58.

MCCOWAN.—On the 7th inst., at Paisley, Robert Thos. McCowan, M.D.

MEADOWS.—On the 8th inst., at Victoria-street, Westminster, Henry Mello Molleras Meadows, L.R.C.P.Ed., aged 70.

ROBERTSON.—On the 4th March, at Melbourne, Victoria, Alexander P. L. Robertson, M.D.

SHIELD.—On the 29th ult., at Blenheim-crescent, Kensington, William Shield, L.S.A.L., aged 69.

WHITE.—On the 2nd inst., at Park-road, Southport, Wm. White, M.D., aged 71.

WOOD.—On the 9th inst., at Loudoun-road, St. John's-wood, William Wood, M.D., Fleet-Surgeon, R.N. (retired list), aged 65.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.*

Notes, Short Comments, and Answers to Correspondents.

DEATH-RATES AND AVERAGE AGE AT DEATH.

A STRIKING example of the fallacious conclusions which may be drawn from the average age at death in different populations is afforded by the Annual Report for 1877, which has just been issued by Dr. Taylor, the medical officer of health for Liverpool. It is stated that the average age at death in the borough during 1877 was 25 years; in the parish, or older part of the town, the ages of the decedents averaged 27; and in the out-townships, only 23 years. If any conclusion were drawn from these figures it would be that the higher average age in the parish signified a better sanitary condition. In another part of the report, however, it is stated that the death-rate in the parish was equal to 31·3 per 1000 persons living, whereas in the out-townships it did not exceed 21·3 per 1000. Although Dr. Taylor does not throw any light upon this apparently contradictory evidence in his report, it will be quite safe to assume that the death-rates very fairly represent the probabilities of life and of death in the more densely populated parish, and in the more modern and less unhealthy out-townships also included within the borough.

POISONOUS VIOLET POWDER.

To the Editor of THE LANCET.

SIR,—Our attention having been drawn to a statement in your journal, in which it is stated that arsenic is used in the manufacture of violet-powder, will you permit us to state, as one of the largest manufacturers of violet-powder, that our preparation is entirely void of arsenic or any other deleterious matter.

As the notice is likely to do us harm, we shall be obliged by your insertion of this letter. We are, Sir, yours &c.,

City-road, E.C., May 4th, 1878. R. HOVENDEN AND SONS.

THE LIMERICK UNION HOSPITAL.

A COMMITTEE appointed by the Board of Guardians of the Limerick Union, to report as to whether the existing medical staff is sufficient to meet the requirements of so large a hospital, have arrived at the unanimous conclusion that the staff is inadequate to secure proper attention to the sick and a proper supervision of the dispensing department. They recommend an enlargement of the staff, so that it shall be composed as follows:—One visiting medical officer, at a salary of £75 per annum; two resident medical officers (there being one at present), at £200 per annum each and apartments, but no rations; one resident pharmaceutical chemist, at £100, and no rations. The recommendations of the Committee led to a lively discussion, which stands adjourned. There are 700 beds in the hospital, and, it is estimated, 200 acute cases on an average. In Dublin there are 15 union hospitals, 2000 beds, and 122 doctors, each having 19 beds to look after; in Cork, 7 hospitals, 440 beds, and 37 doctors, 12 patients to look after; in Belfast, 8 hospitals, 300 beds, and 38 doctors, having 9 patients to look after; in Limerick there are 700 beds, and 3 doctors, with 233 patients each. This is certainly too much. We hope the report of the Committee will be adopted. Dr. Meehan has been elected as visiting physician, in place of Dr. Francis William O'Connor, resigned.

Mrs. D. S. E. Bain.—We fear the law is against our correspondent.

CONGENITAL ABSENCE OF ANTERIOR ABDOMINAL WALL, WITH DISPLACEMENT OF VISCERA.

To the Editor of THE LANCET.

SIR,—The following rare case will doubtless be of interest to your readers, and proves how much vitality some infants have after birth.

A midwife, at 8 A.M. on the 13th of October, brought an infant to this institution. It appeared at full term, with nails, hair, and every other indication of maturity. The surface of the body was very livid, more particularly the hands and feet. It neither cried nor uttered other sounds, but breathed in a quick (38) shallow manner, the abdomen taking but little share in this action. The whole of the anterior abdominal wall was occupied by a gelatinous, tough, yellowish-white membrane, thicker in some parts than others (the general thickness of parchment). It was of oval form, five inches from above downwards, four inches transversely, extending from the upper part of the abdomen nearly to the pubes on each side to the lumbar region. It was transparent almost in parts so that the colon, small intestines, and liver could be seen indistinctly through. In the upper part near the liver it was ruptured, and exposed the purple-black upper surface of that organ. The umbilical cord (small), after passing in a convoluted form some two inches in this membrane, dipped between lobes of liver. On reflexion the semi-transparent membrane was found to be continuous internally with the peritoneum and fascia transversalis; on its outer side it abruptly terminated in the skin, a tough union being formed, only torn with difficulty (like the rest of this membrane). It looked much like the usual junction between the umbilical cord and the umbilicus. It was slightly adherent to the colon and small intestines, more so to the liver, being with difficulty removed from the same in parts. The liver (right lobe superior) was large and engorged, lay with its convex surface looking to the left hypochondrium and lumbar regions, whilst its concave was in an opposite direction. Its long diameter was from above downwards. Both the small and large intestines were much congested, and here and there adherent with recent lymph. The larger portion of the small intestines lay above the liver and to the right; whilst the colon passed from the cæcum in a convoluted form across the lower part of the abdomen, where it ended in the normal position. No great omentum was to be found. The stomach, normally placed, contained about three ounces of grumous food. The sternum was absent, the costal cartilages being joined by a thin membrane (fibrous). No muscular diaphragm could be found, but the thinnest of structures (fibrous) taking its place. Heart and lungs normally placed; but I was unable to investigate the contents of the thorax more carefully in consequence of the body only being allowed a few minutes for examination. I was informed it gradually sank, breathing becoming quicker and more shallow. It lived fifteen and a half hours, taking a little nourishment at intervals.

Yours faithfully,

B. CROWTHER, L.R.C.P.I., &c.,
House-Surgeon to the General Hospital,
March, 1878. Hobart Town.

THE LATE DR. DE LISLE ALLEN.

MISS DE LISLE ALLEN, daughter of the late Dr. de Lisle Allen, will give a benefit concert at the Langham Hall, Great Portland-street, W., on Saturday morning, May 25th, at three o'clock, for which she has secured the valuable assistance of some of the most eminent artistes. We wish her every success in this her commencement of the musical profession, for which, we understand, she is well qualified.

FRACTURE OF HUMERUS BY MUSCULAR ACTION.

To the Editor of THE LANCET.

SIR,—The following case may prove of interest, as being almost exactly similar to the one mentioned by Mr. Bellamy in the current number of THE LANCET.

A lad, aged sixteen, apparently in perfect health, but with rather small muscles, was about to throw a cricket-ball "overhand," when, the arm having been raised above the shoulder, he felt something give way, and it fell to his side, the ball flying out behind him. There was a fracture, apparently transverse, immediately below the insertion of the deltoid. It united firmly in the usual time.

Yours truly,

WILLIAM A. FROST,
North Staffordshire Infirmary, May 14th, 1878. House-Surgeon.

CHOLERA IN INDIA.

RECENT returns from Calcutta and Bombay exhibit a marked increase in the fatality from cholera. Dr. Payne, the health officer of Calcutta, in his monthly return for March last, reports that the deaths from cholera, which had been 98 in February, increased to 312 in the succeeding month; and in the week ending 6th April the fatal cases were 87, against 95 and 80 in the two preceding weeks. Cholera appears to be more or less endemic in Calcutta, and the fatal cases returned during March, of the eleven years 1868-78, ranged from 759 in 1869 to 55 in 1871, and averaged 300. In Bombay the mortality from cholera also showed a considerable increase during last March; in the four weeks ending 2nd April the deaths referred to this disease were 210, against 50 and 118 in the two preceding periods of four weeks. The annual death-rate from all causes during the first quarter of this year was equal to 39 per 1000 in Calcutta, 44 in Bombay, and 72 in Madras. These rates convey a very unsatisfactory impression of the sanitary condition of our three principal Indian cities.

Mr. E. M. Wrench.—The paper has been received, and will be inserted very shortly.

ARMY MEDICAL DEPARTMENT.

To the Editor of THE LANCET.

SIR,—Will you permit me to address you on the subject of the army medical service?

I would endorse in the most emphatic terms the sentiments expressed by your correspondent, "Surgeon-Major," in your issue of March 30th, as I am most decidedly of opinion that the "unification scheme" tends to the good of the service in general, and of the medical department in particular. The thanks and cordial support of our military authorities and of medical officers are, I consider, due to the present Director-General for the able manner in which he has so far carried out the scheme in the face of the strongest opposition, and I am glad to know that he has that support from a very powerful body composed of both doctors and soldiers.

The adherence to the regimental system by some medical officers in the army I honestly state I cannot comprehend, though from those without experience of the service it is conceivable. Under the unification scheme (which ensures our independence of professional action) our usefulness is immensely increased, and our position improved and assured. I make this latter statement advisedly, as I most decidedly feel that my "social status," of which we have heard so much, has been greatly improved by the change. The regimental doctor's position was one of courtesy (not right, which I claim for myself on every ground), as the regulations ranked him junior to all other officers, no matter what his seniority might be; and his comfortable position, when he was comfortable, was owing to the possession by him of that *suaviter in modo* which makes matters run smoothly, and which enables men to make themselves happy under circumstances which would be very trying to those not so endowed. But the point which I wish to insist on mainly is, that the regimental surgeon's usefulness was much interfered with, and in many instances, especially as a sanitary adviser, reduced to the very minimum by the necessity for absolute agreement in opinion with every commanding officer, no matter who that officer might be. All this has been improved away, and, instead, we have an independent medical man—that is, independent in the performance of his medical duties—and a professional gentleman, who is in a recognised position, and respected by all ranks, instead of an individual who was playfully dubbed "our medico" &c., and who was usually a nonentity, and often only tolerated. I have been a regimental medical officer, and I speak from experience, though I was very happy in my regiment, and thought until I knew better that with the abolition of the regimental system all my happiness was wrecked. However, this is entirely secondary to the good of the service, which I unhesitatingly affirm is advanced by unification. Labour is economised, medical men are unfettered in the performance of their duty by petty interference, and are united together in the hospitals to their mutual good and the benefit of their patients.

Our grievances are really not many, and the greatest is the frequent breaches of faith on the part of the authorities. Witness the forage allowance and quarters' regulations. Every mounted officer should have forage allowance if he keeps a horse; in fact, he should be ordered to keep a horse. It is an absurdity and an indignity to see a doctor with a pair of brass spurs in his boots marching in the rear of a column. It is not only an absurdity, but it interferes with his usefulness, as he cannot be available at different points on the field as required. I have personal experience on this point, and I know several who have experience of the injustice of the rule which necessitates the purchase of a horse by an officer at one station, and the selling of him at a great loss on removal to another station where forage allowance is not granted. I saw a case where a surgeon-major was compelled to leave his horse on the beach when embarking at twelve hours' notice on duty with troops. The captain of the troop-ship refused to take the horse because the officer was only provisionally entitled to forage allowance. The officer commanding the troops and the controller at the station supported the captain's view of the case. It is said that the Royal Artillery and Engineers suffer under the same rule; but practically they do not, as forage allowance is given them for field officers' duties, and for the visiting of works &c. We never hear of a mounted Artillery or Engineer officer being compelled to accompany troops on foot, and quite right that we should not; but the possibility is an absurdity, and is no argument why we should have to do so. It is unnecessary to say that an officer, to be usefully mounted with troops, must have a trained horse, which is impossible for a medical officer under the present rule.

As other grievances, I would mention compulsory half-pay after six months' sick leave, the sickness having been contracted in and by the service; the insufficiency of one shilling per diem in lieu of a soldier servant; and the necessity for the certificate of a medical board to ensure a not too liberal retiring allowance after twenty-five years spent for the most part in deadly climates.

The management of the foreign service roster and the distribution of "good things" in the department have been the cause of much jealousy; but these matters are in the hands of our own authorities, and could not be in safer hands.

I think I may say that we do not expect more money at present; but there is an erroneous impression in the army that we are over-paid, which should be removed. We are not as well paid as the Engineers in the higher grades, and no better than paymasters and commissariat officers. Skilled labour has its market price. Ours is very high at present, and it must be paid.

The dearth of candidates at the examinations is to be attributed, I consider, to the following causes:—1stly. The ten years' service rule. Well educated young medical men, as all must be, will not compete under such conditions, which include a return to civil life after ten years, with an implied slur of "dismissal" on their characters; 2ndly, the bad name the department has deservedly been given by those in it, owing to causes some of which have been stated; and 3rdly, the advancement of the profession in public estimation, and the consequent higher price obtained for the commodity in the market, to continue the metaphor before used. A fair price must be given, and an honest agreement entered into, otherwise candidates will not come forward. It was a mistake, many think, to do away with the prefix "assistant" to that of surgeon, and to remove the distinction between men of twelve years' service and twenty-five; but this is, after all, a small matter which does not injuriously affect us. I am satisfied that the abolition of the regimental system ought not to influence intending candidates; and if the fact does influence them, I emphatically state that they are being misled on that point. I say, without fear of contradiction, that the faults almost daily attributed to unification in the public press and elsewhere are faults common to both it and the regimental system, and are due mainly to the scarcity of executive officers. A "master" hand is evident in the published details for the working of the new scheme on active service in the field (circumstances under which the regimental system has already signally failed), and, administered by able and willing officers, it must prove a success.

I am, Sir, your obedient servant,

April, 1878. A. M. D.

Vatican.—Our correspondent should apply at the Offices of the Sanitary Authority of the district he lives in. Lewisham will, no doubt, have public apparatus for carrying out disinfection by heat.

Sigma.—The Ingleby Lectures are announced to be delivered at Queen's College, Birmingham, by Professor Clay, on the 22nd inst.

THE WORKING OF THE CONTAGIOUS DISEASES ACTS.

To the Editor of THE LANCET.

SIR,—In your annotation on the Contagious Diseases Acts in THE LANCET of May 4th you make no mention of the reforms from the hospitals placed in the seven central districts. You will see by Captain Harris's report that for the year ending Dec. 1877, they are as follows:

	Amount Examined.	Reformed.
Portsmouth	966	61
Devonport	674	98
Chatham	397	27
Woolwich	308	21
Aldershot	323	63
Shorncliffe	50	6
Colchester	102	29

The local position of the Chatham Hospital is unfavourable to our getting that help from ladies of the town, which can be more easily procured where the lock wards are a wing of a general hospital, as I believe is the case of the one at Devonport. I find from experience there is a shrinking of my lady friends from coming to a lock hospital, and especially as this is conspicuously placed on a hill, and visible for some distance round. So much for my own and the chaplain's difficulties. The central position of Chatham itself must present great difficulties to the police in the execution of their duties. There is nothing to prevent women from entering the town from one or other of the unprotected towns and villages lying between Chatham and Sheerness or Canterbury late at night, and returning by one of the earliest trains, thus completely eluding the police. I have great reason to suspect this is done, from the fact that women come from these various places, and ask for admission into this hospital, which, on their signing the "voluntary submission," they are allowed to do. These are invariably the worst medical cases, and this shows the desirability of putting these intermediate towns and villages under the protection of the Contagious Diseases Acts, but which I fear, with the ignorant outcry against them, has no chance of being accomplished at present. I shall be glad if this, in your opinion, throws light on the apparent differences in the working of the Acts in the various districts.

Yours faithfully,

M. A. WEBB,

May 7th, 1878. Lady Superintendent, Lock Hospital, Chatham.

J. P. B.—We believe Mr. Parker referred to the method proposed by Mr. Owen Thomas, and set forth in his work "On Disease of the Hip-, Knee-, and Ankle-joints," 1875.

Mr. Lucas, Enquirer, and others.—The Colonial Agency Offices, Downing-street, S.W.

Mr. Robert S. Anderson.—We believe there is no such Society.

THE YEAR-BOOK OF PHARMACY, ETC.

To the Editor of THE LANCET.

SIR,—The editor of the first part of the volume annually issued by the British Pharmaceutical Conference, the part termed the Year-book of Pharmacy, is Mr. Louis Siebold—not the undersigned, as erroneously stated in your review on April 27th. I am only responsible for the second part of the book, the Proceedings of the Conference.

Yours faithfully,

May 9th, 1878. JOHN ATTFIELD.

MR. SPENCER WELLS.

We have seen a plaster bust of this surgeon, which is to be executed in marble at the cost of a few of his friends, and presented to Mrs. Wells. The work, which is by Mr. S. Haydon, of Knightsbridge, presents an excellent likeness of a very well-known face, and will hardly fail, we should think, when wrought in permanent material, to be much valued by its recipient. There were special reasons, we hear, for the sculptor sparing no pains to do honour to his subject, and the work is not the less interesting because it not only preserves the lineaments of a surgeon of whom England has reason to be proud, but it is also a memorial of an artist's gratitude.

Mr E. P. Gutteridge.—The letter is marked for insertion.

"A CURE FOR HYDROPHOBIA."

To the Editor of THE LANCET.

SIR,—I beg to enclose an extract of a letter received from a Catholic missionary in South America, which confirms what I asserted last year, that a decoction of Datura stramonium is a cure for hydrophobia. I heard years ago that it had been successfully employed by Catholic missionaries in China—a fact corroborated by the reverend gentleman who sent me the following interesting particulars. In a letter of Dr. A. W. Baylis, M.R.C.S., of Clear Lake, California, dated December 10th, 1877, occurs the following sentence:—"Whether it is known to European physicians that stramonium has been employed thus I do not know. If not, it is surely worth a trial.

I remain, Sir, your obedient servant,
Birkdale, Southport, May 9th, 1878. C. KROLL LAPORTE.

"Convento Santo Domingo, Quito, Ecuador, South America, Feb. 12th, 1878.

"On December 1st *The Times* reached me, wherein I read your letter on Hydrophobia of October 20th. As the same paper expressed great alarm at the statistics of such infirmity, I take the liberty of introducing myself to you to let you know other items regarding the use of stramonium. I read in No. 308 of *Les Missions Catholiques*, April 30th, 1875, a scientific article on Hydrophobia. The writer said that many years ago a resident of Tongking made this remedy known to a learned French Society, and that a French clergyman tried to diffuse this knowledge through his friends. It thus happened that an eminent clergyman of Paris was saved in 1869, and this gentleman published how he was cured by Datura stramonium when all other remedies prescribed by ancient and modern doctors failed. The writer has known a good many such cures in China, and he stated that stramonium (foreseeing your query) produces a new rabies, which cures the other, as cow-pox destroys the virus of small-pox. He added that a decoction of liquorice-root is the antidote of stramonium. He further states that he had another remedy for hydrophobia, still more efficacious, in the Hoang-nan, a plant like the ivy; he said how it has cured leprosy, so common in China, and even snake-bites &c. He stated to have at his office, Rue d'Auvergne, No. 6, Lyons, France, this Hoang-nan, which he would give gratis provided the demand were made by a physician, since the remedy is a great poison. This Hoang-nan seems really invaluable, because the writer asserts that a little of it will soon show its effects if the bite (!) is not dangerous, while a greater quantity is needed if the virus has been diffused. The family of Datura grows here into big trees. The Datura arborea, with its funnel-shaped, lily-white flowers, and leaves like the tobacco-plant, is a perfect sight when loaded with flowers, which have a delicate smell, from which I would think it to be the Datura suaveolens of Willdenow. The seeds of few plants ripen here on account of the sameness of the seasons.

"(Signed)' NICHOLAS MIALE,
"Cath. Pr. of Natchez, Miss., U. S. America."

C. J. W.—1. The information desired may doubtless be obtained by application to the Secretary of the College.—2. Messrs. Williams and Norgate, Henrietta-street, Covent-garden.

INQUEST OR NO INQUEST.

To the Editor of THE LANCET.

SIR,—My attention having been called to the remarks on the above heading in your issue of the 4th inst, I enclose you the particulars of a case under my own observation of recent occurrence.

On the 6th April I was called to see a child, aged four years, reported to be seriously ill. I found the child suffering from fever, and from the state I found it in was led to make inquiries, when I ascertained the child had been brought home on the previous day some distance by rail to a crowded locality, and that she had been sleeping with her aunt, who was ill with typhoid fever (this I also ascertained by letter from the doctor who was in attendance). I took every precaution, and reported the case to the authorities, which so annoyed the parents that after my second visit I received a message saying I need not call again, as another doctor had been called in. The child died on the following Sunday, six days from my last visit. It was given out that "the doctor" (a quack) stated the case was worm fever, and had treated it as such. In a death certificate, written with his name attached, the cause of death was "convulsions." The district registrar, whom I had informed of the facts, refused to register the death without my certificate, which I positively refused to give under such suspicious circumstances. He at once communicated with the coroner, who sent to say there was no necessity for an inquest, and that the child was to be buried without a certificate, which was carried into effect on the Thursday following. In conclusion, I will add that this person is practising in this extensive neighbourhood in the most defiant manner, although he has not even attended any recognised school of medicine, or studied for the profession. He sends in his bills in the usual way, and charges one shilling for death certificates. Surely such a case as this demands investigation, which I am prevented carrying out in consequence of being about to leave.

Yours faithfully,
North Wales, May, 1878. J. H. H. T.

ROYAL COLLEGE OF SURGEONS: PRIMARY EXAMINATIONS.

THE following were the questions on Anatomy and Physiology submitted to the 130 candidates for the diploma of membership of the Royal College of Surgeons on the 10th instant, when they were required to answer at least four, including one of the first two, out of the six questions:—

1. Describe the structure of the bronchial tubes. What purposes are served by the several tissues which are found in them?
2. What is meant by the vaso-motor centre? Give the evidence of its existence.
3. Describe the articulations and ligaments of the seventh rib, and the attachments of muscles to it.
4. Give the dissection required to expose the gluteal and sciatic arteries outside the pelvis.
5. Describe the course and distribution of the ulnar nerve in the palm, and the dissection necessary to expose it.
6. Describe the entire lachrymal apparatus.

Dr. Carstairs.—The "fancy" alluded to is not a "nautical superstition." It prevails among the least intelligent classes in many districts, rural as well as seafaring.

THE MEDICAL DEFENCE ASSOCIATION AND THE MEDICAL BILL.

To the Editor of THE LANCET.

SIR,—I shall feel obliged if you will allow me to inform your readers that the Duke of Richmond and Gordon, Lord President of the Privy Council, has kindly consented to receive a deputation from the Medical Defence Association on Monday next at three o'clock P.M., in order that the members of the Association may have an opportunity of stating their views on the Bill to amend the Medical Act of 1858, now before the House of Lords.

The Council of the Association, having considered the Bill at several meetings, has adopted a memorial to be presented to the Lord President of the Privy Council, in which the chief points requiring further legislation are set forth. Briefly these are as follows:—

1. That a State examining board for each division of the kingdom be instituted. The examinations for the licence to practise to be full and complete in medicine, surgery, and obstetrics.
2. That the existing medical corporations retain the power to grant degrees and diplomas, but these should be regarded as honorary distinctions only.
3. The General Medical Council to have the power to register colonial practitioners, provided that they produce satisfactory evidence that they have passed an examination equal to that of the State examining board.
4. That no foreign practitioner be admitted to the Medical Register, or be allowed to practise in this country, unless he produces evidence that he is qualified to practise in his own country.
5. That the examinations for women candidates should not be less stringent than those required to be passed by male candidates.
6. That the profession have direct representation on the General Medical Council.
7. That the public be efficiently protected against unqualified practitioners, and that the General Medical Council be required to prosecute those who falsely assume medical titles, or, being unregistered, practise medicine or surgery for gain.

The Council of the Association is of opinion that the above views are in accord with those of the general body of the profession. Should any registered practitioner, although not a member of the Association, wish to join the deputation, I am sure that the President and Council will gladly welcome him. The deputation will meet in the waiting-room at the Privy Council Office, Whitehall, on Monday next at a quarter to three o'clock P.M. Your obedient servant,

GEORGE BROWN,
Hon. Sec., Medical Defence Association.
12, Colebrooke-row, N., May 15th, 1878.

T. S. T.—It is almost impossible to name a fee for so exceptional an attendance as "general practitioner." There must surely be some understanding as to the requital of services involving so great a loss of time and so much trouble, twenty-seven miles from home. Any remuneration adequate to the services rendered would be necessarily very considerable.

DEATH UNDER CHLOROFORM INHALATION.

To the Editor of THE LANCET.

SIR,—On the 9th of this month I administered a mixture of ether and chloroform to a child, aged eight, with fatal result. The patient was healthy and well nourished, but very timid, and to overcome this latter condition I held a napkin sprinkled with Duncan's chloroform in front of the face, at a distance of about a foot. This I gradually brought nearer, and then added a small quantity of ether, which produced at once laryngeal irritation and general discomfort. This napkin was then removed, and another, containing about half a drachm of chloroform, used in its place, free access to the mouth being allowed for the surrounding air. Sleepiness was thus comfortably induced, and then ether was again freely used, and with this agent the complete anæsthesia was procured. The operation (the removal of two molar teeth) was successfully completed, and the pulse and breathing were all that could be desired. My patient shortly became partially conscious, and endeavoured to get rid of some of the blood in her mouth. Suddenly a shadow seemed to pass over the face, which at once became livid, the pulse and breathing stopped, and the child was dead. All efforts to restore animation were fruitless.

I do not know of any parallel to this sad case, and offer this brief account to the profession. Hereafter I shall hope to give a more complete history of the event, with comments.

I am, Sir, your obedient servant,
JAS. GODFREY THRUPP,
Late Anæsthetist to St. George's Hospital.
Elgin-road, Kensington-park-road, May 15th, 1878.

ABDOMINAL BELTS.

To the Editor of THE LANCET.

SIR,—In your issue of the 4th instant, your correspondent, Dr. James Lattey, directs attention to the difficulty of keeping abdominal belts in position without the aid of perineal straps, which in many respects are objectionable. Will you allow us to observe that the belts we supply, from having the fibres of the material in the direction of the muscles, and not antagonistic to them, are not liable to "ride up," no instance having occurred to us in a very large experience, except occasionally, when the measures of the pelvis are larger than those taken just under the crest of the ilium. In such cases it has been our custom to employ a very simple and effectual remedy without the necessity of resorting to perineal straps, and that is, by connecting the belts to the stockings by means of "the stocking suspender," generally known for supporting stockings in lieu of garters. These are furnished with two spring clips, and thus furnish a simpler and quite as efficient a support as that suggested by your correspondent.

Yours obediently,

Birmingham, May 14th, 1878. SALT AND SON.

"DENTISTRY EXTRAORDINARY."

To the Editor of THE LANCET.

SIR,—In your journal for April 10th last, at page 588, attention is called to the practice of extracting teeth, and then, after stopping them, replacing them. I was not aware that the practice was so uncommon. Some years ago, while in general practice, I had a case of very troublesome hæmorrhage after extracting a tooth. Failing to check the hæmorrhage by plugging the alveolus with cotton-wool soaked with perchloride of iron, I cleaned and stopped the tooth, and replaced it in its alveolus. The hæmorrhage was completely checked, and the tooth was allowed to remain. It afterwards got firmly fixed, and proved as serviceable as ever. Subsequently I repeated the operation several times with perfect success. For a day or two a feeling of discomfort was complained of, but only such as is experienced by those who wear artificial teeth for the first time. To ensure success, the bleeding should entirely cease before replacing the tooth. The neglect of this in one or two instances caused a good deal of pain, and it was found necessary to extract the tooth a second time.

Yours truly,

Edinburgh, April, 1878. JOHN TREHARNE.

THE "Manual of Necroscopy," published by Messrs. Smith and Elder, has for its author Dr. A. H. Newth, not "Hewitt," as incorrectly printed a week or two ago.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Pavy, London; Professor Bentley, London; Professor Attfield, London; Professor Leishman, Glasgow; Dr. Dyce Duckworth, London; Mr. Sarivan, Dublin; Mr. Sproston, Birmingham; Mr. Laporte, Southport; Dr. Schumacher, Aix-la-Chapelle; Mr. Swarbrick, Preston; Mr. Warner, London; Mr. Davies, Holywell; Mr. Skilbeck, Bournemouth; Mr. Bell, Exeter; Mr. Frost; Dr. Carstairs, Westminster; Mr. Coles; Mr. Illingworth, Peterborough; Mr. Greenwood, London; Mr. Morgan, London; Dr. Newth, Hayward's Heath; Dr. Anderson, Spennymoor; Mr. E. Carr-Jackson, London; Dr. Goodhart, London; Mr. Bain, Mere; Dr. Clifford Allbutt, Leeds; Mr. Croft, London; Dr. Gwyther, Argotti; Dr. Ritchie, Otley; Messrs. Eyles and Son, Brighton; Mr. Ingpen, London; Mr. Haydon; Mr. Graham, Wigan; Dr. Townsend; Messrs. Salt and Son, Birmingham; Dr. Cane; Mr. Black; Mr. P. Smith, Birmingham; Mr. Blackwell; Mr. Davis, Mossley; Messrs. Hovenden and Co.; Mr. Bennett May, Birmingham; Dr. Vernon; Mr. Eastwood; Dr. Brown, Birmingham; Dr. Jell; Mr. Wrench, Chesterfield; Mr. W. Dunn, Aberdeen; Dr. Skrimshire, Holt; Mr. Snell; Mr. Keen, Paisley; Mr. Findlay; Mr. Birch; Mr. Williams; Dr. Thursfield, Leamington; Dr. Gutteridge, Maldon; Mr. Thrupp, Kensington; Mr. Lucas, Liverpool; Mr. Bobb; Dr. King; Mr. Galbraith, Edinburgh; Dr. J. W. Z.; Royal Institution; Vatican; The Secretary of the Royal College of Surgeons of Edinburgh; Senex; L.R.C.P. Ed.; The Secretary of the Epidemiological Society; Nerve; J. G. A.; R. W.; Medicus, Bath; J. P. S.; Medicus, Sheffield; L.M.; A. B. C.; The Registrar-General of Births and Deaths; Medicus, Chester; Miles Indicus; W. B. B.; Chloroform; C. C.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Evans, Llanelly; Dr. Morson, Sydney, New South Wales; Mr. W. Adams, London; Mr. M'Callum, Ayr; Mr. M'Gown, Paisley; Dr. T. Wilson, Edgworthstown; Messrs. Macniven and Cameron, Edinburgh; Mr. Laud, Birkenhead; Messrs. Byles and Son, Bradford; Dr. Davies, Rhbw Vale; Mr. Waterhouse; Messrs. Drayton Brothers; Mr. Duke, Wells; Dr. Hughes, Llanberis; Mr. Kempthorne, Callington; Mr. Thomas, Clunes, Australia; Mr. Coulton, Birmingham; Mr. Davey; Dr. Cosmon, Great Maldon; Mr. Legge, Aberdeen; Dr. Rutherford, Shipley; Mr. Holloway, Minster; Mr. Bryan, Hartlepool; Dr. Greene, Beverley; Dr. Burman, Wath; Mr. Welford; Dr. Taylor, Cardiff; Dr. Trousdell; Dr. Wilson; Dr. Latham, Ashton; Mr. Vance; Mr. Elliott; Medicus, Cornhill; A. W.; Medicus, Penge; Chemist; H. V., Clapham; J. A. P., Bedford; ——, New York; H. H.; A. B., Stroud; H. M. D.; Medicus, Brecon; W. S., Aberdare; V.; Alpha; A. C., Chelmsford; Chirurgicus; A. B., Dublin; P. M., Thrapstone; M. D.; M. M. R.; Surgeon; B. B.; L. S. A., Woolwich; Medicus, Manchester; R. S.; C. W.; M.R.C.S., Great Grimsby; Medicus.

British Architect, Cambridge University Reporter, Glasgow Herald, Limerick Chronicle, Spiritualist, Colonies and India, Hastings and St. Leonard's Times, Manchester Examiner, Borough of Wednesbury Herald, West End News, Law Journal, Wrexham Guardian, &c., have been received

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, MAY 16TH, 1878

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb	Dry Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
May 10	29·34	E.	55	59	106	72	51	0·02	Cloudy
,, 11	29·60	E.	56	57	105	71	54	0·22	Overcast
,, 12	29·77	S.E.	58	68	109	74	57	..	Fine
,, 13	29·58	S.W.	54	56	105	66	54	0·12	Overcast
,, 14	29·48	W.	52	54	99	65	51	0·02	Cloudy
,, 15	29·50	S.W.	52	55	97	63	52	0·04	Overcast
,, 16	29·32	S.W.	55	59	99	69	50	0·07	Cloudy

Medical Diary for the ensuing Week.

Monday, May 20.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

Tuesday, May 21.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. T. Thiselton Dyer, "On some Points in Vegetable Morphology."
PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following Specimens will be shown:—Carcinoma of the Orbit; French Millstone-maker's Lung; Cerebral Aneurism; Cerebral Embolism; Anatomy of Dyshidrosis (Specimens exhibited by Dr. T. Fox and Dr. Crocker will be on view at 8 P.M.); Cavity in the Spinal Cord; Polypus from Nose, Antrum, and Orbit; Colloid Cancer of Breast; Aneurism of the Pulmonary Artery; Ovarian Cysts from Twin Infants; Spontaneous Rupture of the Œsophagus; Primary Cancer of Lung; Specimens of Biliary Cirrhosis; Aneurism of Pulmonary Artery, with Fatal Hæmoptysis; Specimens of Filaria.

Wednesday, May 22.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, May 23.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
ROYAL INSTITUTION.—3 P.M. Lord Rayleigh, "On Colour."

Friday, May 24.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Weekly Meeting.—9 P.M. Professor Ramsay, "On the Geology of Gibraltar and the opposite Coast of Africa."
QUEKETT MICROSCOPICAL CLUB.—8 P.M. Mr. B. Thompson Lowne, "On the Structure of the Eyes of Insects."
CLINICAL SOCIETY OF LONDON.—8½ P.M. The President (for Dr. Day): "Sequel of a Case of Chylous Discharge from the Leg."—Dr. Farquharson, "On a Case of Quinine Rash."—Mr. Cripps, "On a Case of Gastrotomy for Intestinal Obstruction."—Dr. Murchison: "Incubation Period of Scarlet Fever and of some other Diseases."—Mr. Bryant: "Sudden Death following Tapping of an Hydatid of the Liver."—Mr. Brown: "Sequel of a Case of Cancer of the Tongue."

Saturday, May 25.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Morley, "On Richard Steele."

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